Barracuda Web Filter Administrator's Guide

Version 3.3

Barracuda Networks Inc.
3175 S. WInchester Blvd
Campbell, CA 95008
http://www.barracuda.com

Copyright Notice

Copyright 2004-2008, Barracuda Networks
www.barracuda.com
v33-080413-01-0413

All rights reserved. Use of this product and this manual is subject to license. Information in this document is subject to change without notice.

Trademarks

Barracuda Web Filter is a trademark of Barracuda Networks, Inc. All other brand and product names mentioned in this document are registered trademarks or trademarks of their respective holders.

Contents

Chapter 1 – Introduction 7

Overview 8
- Spyware-blocking techniques 8
- Content-filtering techniques 9
- User and group-based policy control 9
- Application-blocking techniques 9
- Energize Updates minimize administration and maximize protection 9

Deploying the Barracuda Web Filter 11
- Inline pass-through (transparent) mode 11
- Forward proxy 13

Chapter 2 – Installation and Configuration 15

Network considerations 16
- Routers 16
- External DNS 16
- Internal DNS 16
- Enterprise class Layer 3 switch, VLANS, VPN concentrators 16
- Firewall DMZ 17
- Internal servers 17
- Cache 17
- QoS/packet reconfiguration (Quality of Service, packet shapers) 17
- Mounting and cabling considerations 17

Installing and configuring the Barracuda Web Filter 18
- Step 1. Verify that you have the necessary equipment 18
- Step 2. Install the Barracuda Web Filter 18
- Step 3. Configure the Barracuda Web Filter IP and network settings 19
- Step 4. Configure your corporate firewall 20
- Step 5. Configure the Barracuda Web Filter 20
- Step 6. Update the Barracuda Web Filter firmware 21
- Step 7. Verify your subscription status 22
- Step 8. Update the definitions 23
- Step 9. Integrate the Barracuda Web Filter into your network 23
- Step 10. Test and adjust the Barracuda Web Filter 24

Connecting the Barracuda Web Filter to your network 24

Advanced installation topics 26
- Inline pass-through with pre-existing proxy deployment 26
  - Supported pre-existing proxy types 27
- Connecting inline to your network with a pre-existing proxy server 28

Chapter 3 – Configuring, Monitoring, and Managing the Barracuda Web Filter 31

Configuring the Barracuda Web Filter 32
- Configuring system IP information 32

Setting up linked management . . . 32
Data propagated to the linked systems . . . 33
Switching a system to standby mode . . . 34
Controlling access to the Web interface . . . 34
Customizing the appearance of the Web interface . . . 34
Changing the language of the Web interface . . . 34
Setting the time zone of the system . . . 34
Enabling and disabling virus protection . . . 35
Enabling and disabling Web caching . . . 35
Setting up a syslog server to centrally monitor system logs . . . 35
Creating block and accept filters . . . 36
Best practices . . . 36
Filtering and blocking features . . . 37
Content filtering . . . 37
Application filtering . . . 37
Domain filtering . . . 38
URL pattern filtering . . . 38
Custom categories filtering . . . 38
MIME type blocking . . . 39
IP-based filtering . . . 39
IP-based exemption from filtering and blocking . . . 39
Block messages . . . 39
About the Barracuda Spyware Removal Tool . . . 40
Enabling the Barracuda Spyware Removal Tool . . . 40
Exception policies . . . 40
HTTPS filtering option . . . 41
Scope of HTTPS traffic filtering . . . 41
Limitations for HTTPS traffic filtering . . . 42
To enable the HTTPS traffic-filtering option . . . 42
Testing Web site access . . . 42
Monitoring the Barracuda Web Filter . . . 43
Viewing performance statistics . . . 43
Understanding the indicator lights . . . 43
Viewing the traffic log . . . 44
Viewing the application log . . . 45
Viewing the warned activity list . . . 45
Automating the delivery of system alerts and notifications . . . 46
Generating system reports . . . 46
Viewing a list of infected clients . . . 46
Viewing system tasks . . . 46
Managing the Barracuda Web Filter . . . 48
Backing up and restoring system configuration . . . 48
Updating the Barracuda Web Filter firmware . . . 48
Updating the spyware, virus, and category definitions . . . 48
Replacing a failed system . . . 49
Reloading, restarting, and shutting down the system . . . 49
Using the built-in troubleshooting tools . . . 49
Rebooting the system in recovery mode . . . 50
Reboot options . . . 51

Chapter 4 – Managing Users and Groups 53

Overview 54
About local users 54
About domain users 54
Creating local users and groups 55
Creating local user accounts 55
Creating local groups 55
Creating IP address groups 55
Integrating with a user authentication service 56
Enabling LDAP domain user authentication 56
To enable LDAP user authentication 56
About the optional Barracuda DC Agent software 56
Installing the Barracuda DC Agent on your domain controllers 58
Exempting selected LDAP domain users from filtering 58
Enabling NTLM domain user authentication 59
About NTLM authentication in Windows 2000 or 2003 AD domains 59
Reasons for using an NTLM authentication server 59
Requirements for using an NTLM authentication server 59
Limitations when using an NTLM authentication server 59
To enable NTLM user authentication 60
Viewing and managing accounts 61

Appendix A – About the Barracuda Web Filter Hardware . . 63

Front panel of the Barracuda Web Filter 64
Barracuda Web Filter 210, 310, and 410 64
Barracuda Web Filter 610 65
Barracuda Web Filter 810 and 910 66
Back panel of the Barracuda Web Filter 68
Barracuda Web Filter 210, 310, and 410 68
Barracuda Web Filter 610 69
Barracuda Web Filter 810 and 910 69
Hardware compliance 71
Notice for the USA 71
Notice for Canada 71
Notice for Europe (CE Mark) 71

Appendix B – Regular Expressions 73

Using special characters in expressions 74
Examples 74

Appendix C – Limited Warranty and License 75

Limited warranty 75
Exclusive remedy 75
Exclusions and restrictions 76
Software license 76
Energize Update Software license 77
Open Source Licensing 81

Index 91

Chapter 1
Introduction

This chapter provides an overview of the Barracuda Web Filter and includes the following topics:

- Overview on page 8
- Deploying the Barracuda Web Filter on page 11

Overview

The Barracuda Web Filter is an integrated anti-spyware and content filtering solution that eliminates spyware and other forms of malware from your organization.

The Barracuda Web Filter combines preventative, reactive, and proactive measures to form a complete anti-spyware solution. The Barracuda Web Filter:

- Provides user and group-based policy control
- Stops spyware downloads (including drive-by downloads)
- Uses content filters to block access to Web site categories like gaming or online shopping sites
- Blocks access to applications like instant messaging and music streaming
- Blocks access to spyware Web sites
- Detects spyware access to the Internet
- Identifies infected machines
- Facilitates spyware removal by providing access to the Barracuda Spyware Removal Tool

Spyware-blocking techniques

The Barracuda Web Filter prevents spyware programs from being installed on your users' systems and also secures your organization against existing spyware by detecting spyware access to the Internet and notifying you of infected systems. You can also configure the Barracuda Web Filter to prompt infected users to run the Barracuda Spyware Removal Tool.

Table 1.1: Spyware Functions

Function	Description
Spyware Web site Blocking	Barracuda Networks continuously updates a list containing thousands of known spyware download sites. The Barracuda Web Filter blocks spyware at the source by preventing browser and application access to these locations.
Spyware Download Blocking	Spyware is everywhere, even in apparently harmless downloads from legitimate sites. The Barracuda Web Filter unpacks and examines every individual file within 17 different types of archives. It also uses techniques to examine password-protected archives.
Spyware Detection	The Barracuda Web Filter not only identifies infected machines on the network, but also blocks the spyware communication from those infected systems to the spyware servers on the Internet.
Spyware Removal	The Barracuda Web Filter can be configured to automatically prompt users to run the Barracuda Spyware Removal Tool when spyware is detected on their system. This feature allows users to proactively remove spyware so they do not have to rely on network administrators to perform this task.

The Barracuda Web Filter scans inbound traffic for the following malware over HTTP port 80 and FTP port 21: spyware (such as keyloggers, Browser Helper Objects [BHOs], and data miners), adware, trojans, and viruses. The Barracuda Web Filter also scans outbound traffic on all ports and protocols to prevent spyware from communicating outside of your network.

Content-filtering techniques

In addition to protecting your network from spyware infections, the Barracuda Web Filter also uses filters to protect your users from visiting offensive Web sites and to help enforce your organization's Internet usage policies.

To block access to offensive sites, the Barracuda Web Filter includes a URL list containing millions of URLs classified into 58 categories for easy and efficient content filtering. This list is continuously updated by engineers at Barracuda Central and delivered hourly via the Energize Updates subscription service sold with the Barracuda Web Filter.

These content filters can help organizations comply with new security initiatives and standards.

User and group-based policy control

The Barracuda Web Filter enables you to create exception policies for specific users and groups so they can override the blocking filters that prevent them from accessing content or applications. These policies are useful in providing executives and departments with additional control over the content they can access.

You can also use exception policies to allow users to bypass blocking filters during specific hours of the day. For example, you can configure the Barracuda Web Filter to allow users to access shopping or gaming sites only during non-business hours.

Application-blocking techniques

Many organizations choose to block access to certain applications so they can minimize the amount of non-essential traffic on their network and to prevent users from running applications that can spread viruses or other malware. For this reason, the Barracuda Web Filter enables you to block access to applications based on their MIME type or port number as well as to common applications like Real Player or Yahoo Messenger.

For example, you can use the MIME type blocking feature to prevent users from running executable files (.exe) or from streaming music and video files over your network.

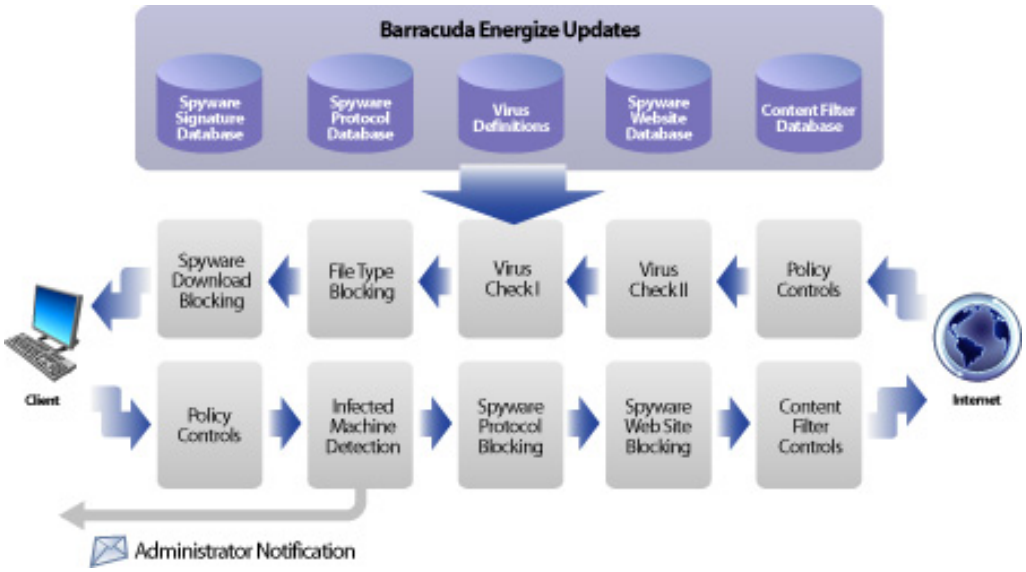
Energize Updates minimize administration and maximize protection

To provide you with maximum protection against the latest types of spyware, Barracuda Networks maintains Barracuda Central, a powerful operations center. From this center, engineers monitor the Internet for trends in spyware and automatically deploy updates and definitions via Barracuda Energize Updates.

By identifying spyware trends early on, the team at Barracuda Central can quickly develop new and improved blocking techniques that are quickly made available to your Barracuda Web Filter. Barracuda Central has identified over 2,000 spyware applications that are actively blocked and is continuously adding to this list.

The following figure shows how Barracuda Central provides the latest rules and definitions through the Energize Update feature.

Figure 1.1: Barracuda Energize Updates



Deploying the Barracuda Web Filter

You can deploy your Barracuda Web Filter so it is either inline with your core network components, or you can deploy the system as a forward proxy. The following sections provide a brief overview of each deployment type.

Inline pass-through (transparent) mode

Inline pass-through is the recommended type of deployment because it provides the strongest level of protection against spyware. In this deployment, the Barracuda Web Filter is directly inline with your core Internet network components, and all network traffic to the Internet passes through the Barracuda Web Filter. In this mode, your Barracuda Web Filter is able to:

- Filter and scan all Internet traffic requests.
- Perform content filtering and scan downloads for spyware and viruses.
- Detect and block outbound spyware protocol requests.
- Scan all outbound traffic for spyware activity on all ports to detect infected clients.

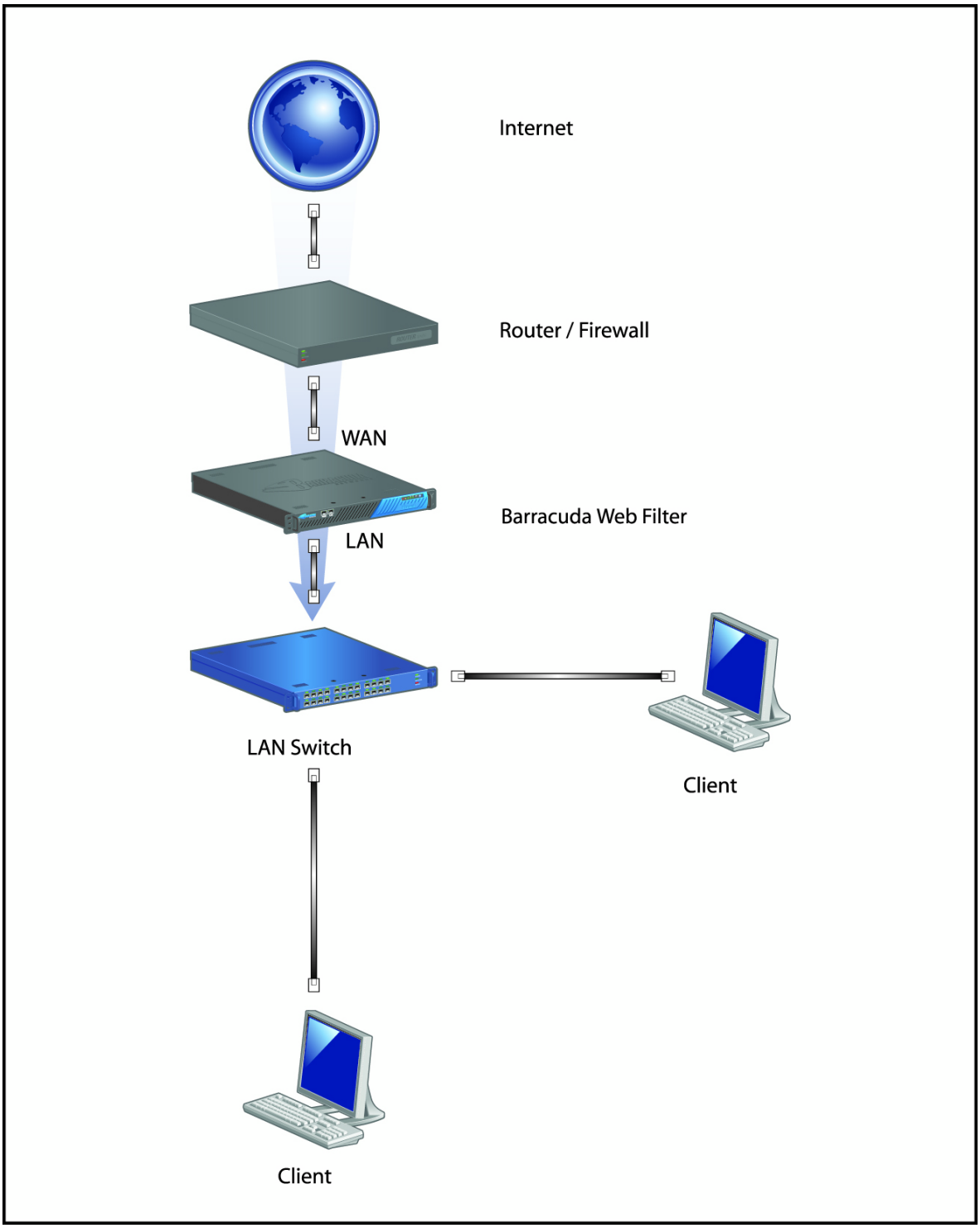
Inline pass-through deployment requires you to have an understanding of your network topology because even though the Barracuda Web Filter acts as a proxy, it does not participate in routing protocols. As a result, you may need to set up static routes in your Barracuda Web Filter so it knows how to properly route traffic.

The following table describes the advantages and disadvantages of deploying your Barracuda Web Filter in inline pass-through mode.

Advantages	Disadvantages
Supports application blocking	May require setting up static routes in your Barracuda Web Filter.
Supports automatic pass-through mode in the event of a system failure (model 310 and above)	Initial setup requires an interruption to network traffic while you make necessary cabling changes.
Does not require users to configure proxy server settings in their Web browser	
Uses perimeter transparency mode that exposes client IP addresses (supports corporate firewall rules)	

Figure 1.2 illustrates a basic installation using the Inline Pass-Through deployment.

Figure 1.2: Inline Pass-through Deployment



Forward proxy

The forward proxy deployment uses a proxy as an intermediary between a client and the Internet to protect the client from being visible from the Internet. In a forward proxy deployment, only HTTP Internet traffic passes through the Barracuda Web Filter. After the Barracuda Web Filter processes clients' requests, it sends the requests out directly to the Internet.

When deployed as a forward proxy, the Barracuda Web Filter shows all HTTP traffic as coming from its own IP address instead of from the individual client IP addresses as is done in the inline pass-through deployment.

We recommend deploying the Barracuda Web Filter in forward proxy mode in the following situations:

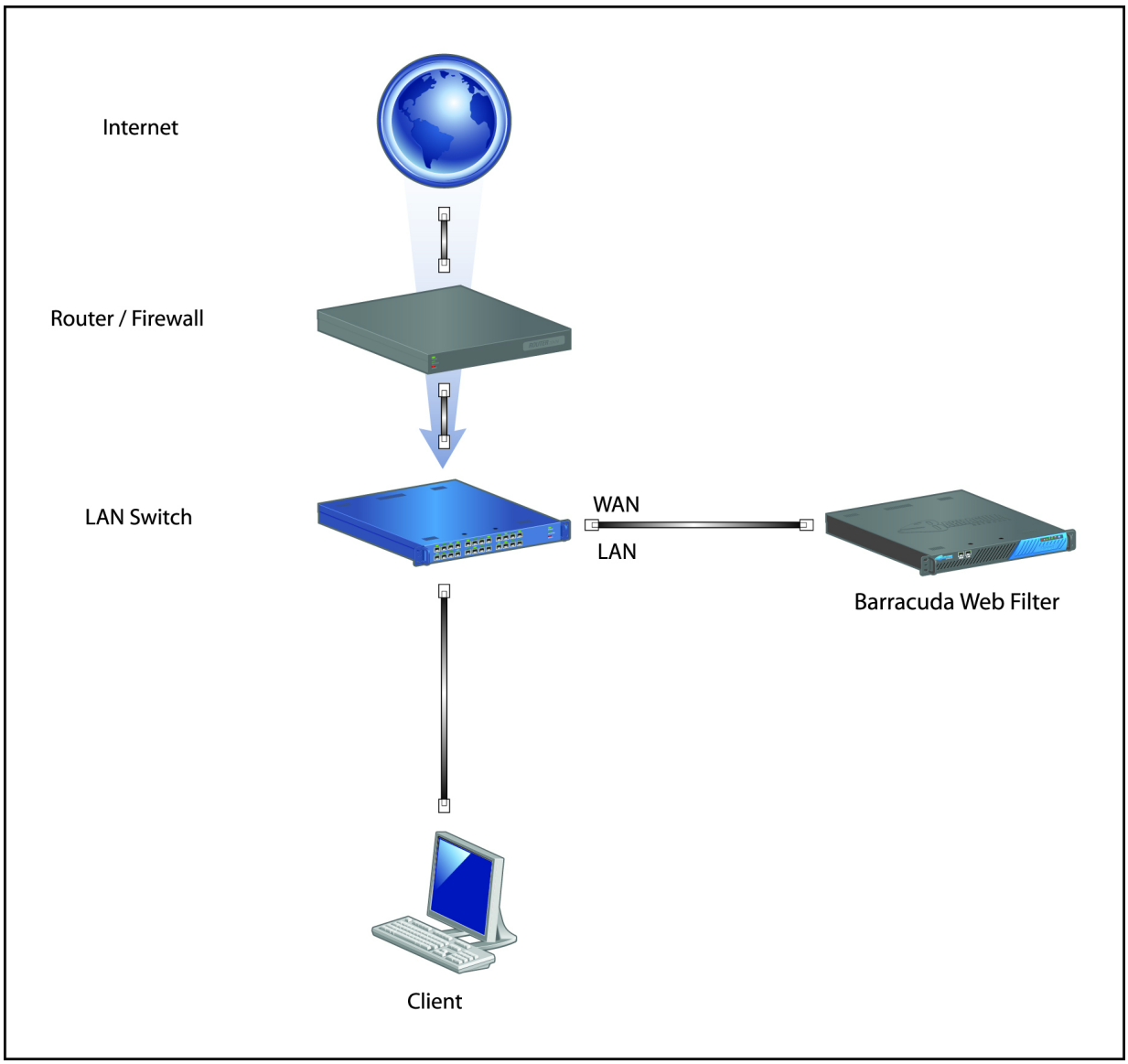
- You need to replace an existing forward proxy (such as Microsoft ISA Server) with the Barracuda Web Filter.
- You do not want the Barracuda Web Filter to reside inline with all your network traffic and are satisfied with the system only scanning HTTP traffic for viruses and spyware.

The following table describes the advantages and disadvantages of deploying your Barracuda Web Filter in forward proxy mode.

Advantages	Disadvantages
The initial setup of forward proxy mode does not require any interruptions to your network traffic.	Because the Barracuda Web Filter only scans outbound HTTP traffic, the system cannot perform the following functions in forward proxy mode: • Block access to applications listed on the **BLOCK/ACCEPT > Applications** page. • Block access to applications that use the destination IP address specified on the **BLOCK/ACCEPT > IP Block/Exempt** page. • Block access to applications that use the destination port specified on the **BLOCK/ACCEPT > IP Block/Exempt** page. • Inspect outbound traffic for spyware infection activity.
Does not require the configuration of static routes.	The Barracuda Web Filter does not scan non-HTTP traffic for viruses and spyware.
	Requires clients' Web browsers to be configured with the IP information of the forward proxy server (Barracuda Web Filter).

Figure 1.3 illustrates a basic installation using the Forward Proxy Deployment.

Figure 1.3: Forward Proxy Deployment



Chapter 2
Installation and Configuration

This chapter provides general instructions for installing the Barracuda Web Filter.

This chapter covers the following topics:

Network considerations *16*
Installing and configuring the Barracuda Web Filter *18*
Advanced installation topics *26*

Network considerations

The Barracuda Web Filter appliance is a low-risk deployment because it is designed to be a bridge within your network. The appliance can view Internet traffic that passes through the network but does not affect its routing. To reduce the risk of interfering with important network traffic, initially set the Barracuda Web Filter to monitor and log the spyware activity only. Determine which internal servers and clients to exclude from spyware and virus scans.

These pre-installation considerations may help you understand some of the issues that may occur.

Routers

Make sure the default gateway is properly set to reach the Internet. Also, if you are testing the Barracuda Web Filter in one portion of your network and move to another portion of the network for deployment, make sure that you check the default gateway and make changes as necessary.

External DNS

Some of the considerations regarding DNS include the following issues:

Optimal DNS query response time—When the Barracuda Web Filter is in **Active** mode, it proxies all Internet requests for the clients. As a result, the Barracuda Web Filter needs to resolve website hostnames to IP addresses while proxying the HTTP requests made by the users. The response for DNS queries needs to be optimal to allow the Barracuda Web Filter to look up and quickly process these requests. A slow DNS server will cause the Barracuda Web Filter to respond slowly to clients, which adds latency to their Internet access.

Requests for fully qualified Web application server names—If a user attempts to browse to a Web site by specifying a Web server name is not a *fully qualified* name that includes the domain name, the Barracuda Web Filter automatically appends the string **`barracuda.com`** to the unqualified name in order to resolve the request. For example, if the user enters the server name `myserver` instead of `myserver.mydomain.com`, the Barracuda Web Filter resolves the request using the hostname `myserver.barracuda.com`.

Internal DNS

If you have an internal server that is only resolvable via an internal DNS, make sure that this DNS server is used by the Barracuda Web Filter as a secondary DNS.

Enterprise class Layer 3 switch, VLANS, VPN concentrators

These device types are normally capable of handling multiple subnets and providing default routes to clients. However, they may affect the Barracuda Web Filter deployment in the following ways:

- A Layer 3 switch can also be set up to have multiple VLANs (Virtual Local Networks) using port assignments. There is no side effect by having VLAN tags in the traffic that is visible to the Barracuda Web Filter. However, when the Barracuda Web Filter is set up to a single subnet, it needs to have routes to process requests for other subnets.
- A standard solution is to add static routes to these foreign subnets. All Layer 3 switch subnets should use its IP address as the gateway. In the case of a VPN concentrator, use the IP of the concentrator as the default gateway for all the networks aggregated by that VPN concentrator.

Firewall DMZ

A demilitarized zone (DMZ) is an area where any servers that access the Internet are placed. Servers inside this zone may be configured to access certain servers within an internal network with their own security rules set up. Normally these servers need to be accessible from the Internet such as email servers. The Barracuda Web Filter should not be deployed to protect these machines. The Barracuda Web Filter is not designed to protect servers but to protect end user machines.

Internal servers

In most organizations, internal servers are protected by corporate firewalls that use port forwarding rules to limit access to the servers. Port forwarding rules define the ports that can be used to access the servers (such as HTTP, FTP, and mail servers). These servers should have optimal response time.

As a result, the server traffic must not be interrupted. Barracuda Networks recommends that you exempt or bypass these servers from the Barracuda Web Filter. To reduce Layer 2 bridging overhead, place a switch between the firewall and the Barracuda Web Filter and connect your server farm on a different port on the switch. In this case, set up the servers parallel to the Barracuda Web Filter instead of behind it, and the configure exempt IP addressing feature to exclude these IP addresses from server exemption.

Cache

Caching usually provides faster access to repetitive content by keeping content locally on the Barracuda Web Filter. However, some customers have concerns over how the Barracuda Web Filter keeps the data accurate. The Barracuda Web Filter handles the data by using an LRU (Least Recently Used) algorithm. The Barracuda Web Filter must be configured with the current time since it uses the current time to check for updates for every HTTP request.

QoS/packet reconfiguration (Quality of Service, packet shapers)

There are many products available that can control traffic in a LAN environment, specify priorities, and size these different traffic types. Normally, this is done using a Layer 7 device on different types of applications. The Barracuda Web Filter deployment is affected when the Barracuda Web Filter is placed in front of these devices to benefit from the shaped data. Place the Barracuda Web Filter close to the Internet to help reduce noise and overhead on both the Layer 2 bridging and HTTP proxy.

Mounting and cabling considerations

To install the Barracuda Web Filter you need to:

- Mount it on a rack or shelf
- Cable it to other network devices

The Barracuda Web Filter is designed to be installed in a data center with other networking devices and servers. Its dimensions are suitable for a 19-inch rack. You must position it within cabling distance of any switches or other devices that access the network segments that you want to protect. The appliance can be mounted facing either direction in your rack, so consider which side will have access to the ports and which will have access to the LED lights.

You may need access to the ports during installation, and you may need to use the back panel during initial configuration.

Installing and configuring the Barracuda Web Filter

These are the general steps to set up your Barracuda Web Filter. For more detailed instructions for each step, see the following reference pages.

Step 1. Verify that you have the necessary equipment on page 18

Step 2. Install the Barracuda Web Filter on page 18

Step 3. Configure the Barracuda Web Filter IP and network settings on page 19

Step 4. Configure your corporate firewall on page 20

Step 5. Configure the Barracuda Web Filter on page 20

Step 6. Update the Barracuda Web Filter firmware on page 21

Step 7. Verify your subscription status on page 22

Step 8. Update the definitions on page 23

Step 9. Integrate the Barracuda Web Filter into your network on page 23

Step 10. Test and adjust the Barracuda Web Filter on page 24

Step 1. Verify that you have the necessary equipment

Before installing your Barracuda Web Filter, make sure you have the following equipment:

- Barracuda Web Filter (check that you have received the correct model)
- AC power cord
- Ethernet cables
- Mounting rails and screws (available for models 610, 810, and 910 only)
- VGA monitor (recommended)
- PS2 keyboard (recommended)

Step 2. Install the Barracuda Web Filter

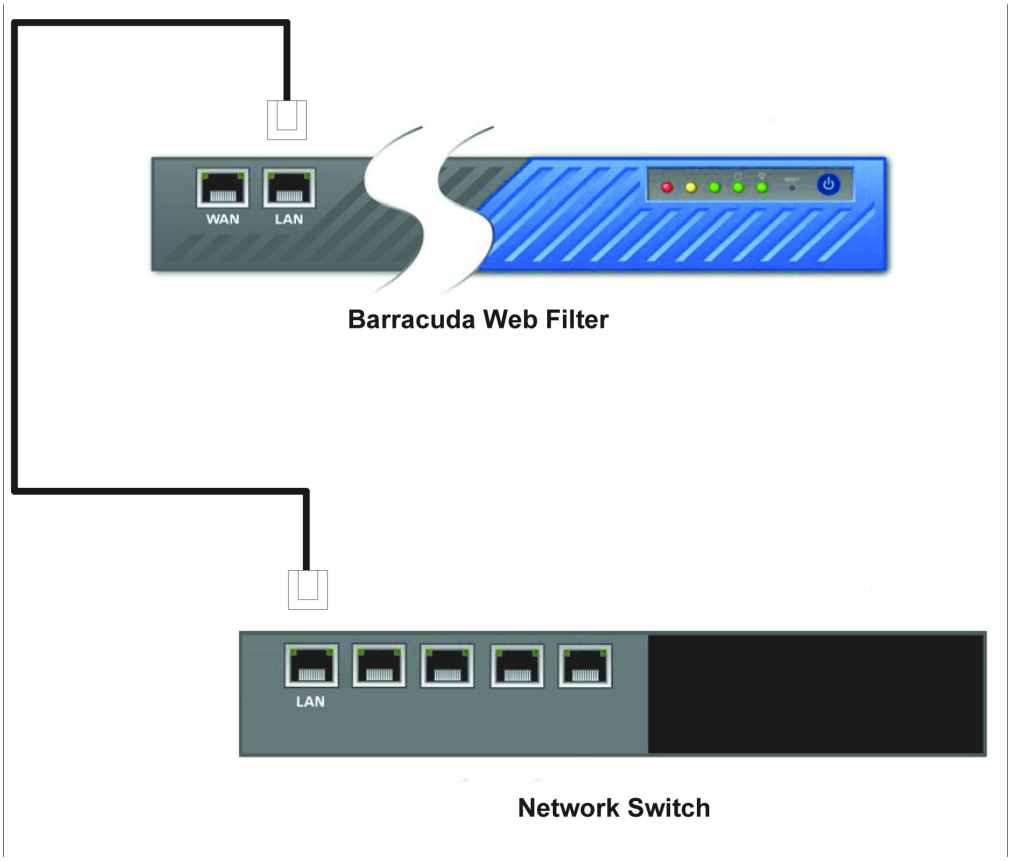
To physically install the Barracuda Web Filter:

1. Fasten the Barracuda Web Filter to a standard 19-inch rack or other stable location.

   CAUTION! Do not block the cooling vents located on the front and rear of the unit.

2. Connect a CAT5 Ethernet cable from your network switch to the LAN port on the front of your Barracuda Web Filter, as shown in the following figure.

Figure 2.1: Connecting the Barracuda Web Filter to your Network



The Barracuda Web Filter supports 10BaseT, 100BaseT, and Gigabit Ethernet (higher end models only).

Do not connect any other cables to the unit. The connectors on the back panel are for diagnostic purposes.

3. Connect the following hardware to your Barracuda Web Filter:
   - Power cord
   - VGA monitor
   - PS2 keyboard

   After you connect the AC power cord, the Barracuda Web Filter may power on for a few seconds and then power off. This behavior is normal.
4. Press the **Power** button located on the front of the unit.

   The login prompt for the administrative console displays on the monitor, and the power light on the front of the Barracuda Web Filter turns on. For a description of each indicator light, refer to Understanding the indicator lights on page 43.

Step 3. Configure the Barracuda Web Filter IP and network settings

The Barracuda Web Filter is assigned a default IP address of 192.168.200.200. You can change the address using the administrative console or by pressing and holding the **RESET** button on the front panel.

Holding **RESET** for eight seconds changes the default IP address to 192.168.1.200. Holding the button for 12 seconds changes the IP address to 10.1.1.200.

To set a new IP address from the administrative console:

1. Connect your keyboard and monitor directly to the Barracuda Web Filter.
2. At the `barracuda login` prompt, enter **admin** for the login and **admin** for the password.

   The User Confirmation Requested window displays the current IP configuration of the Barracuda Web Filter.
3. Using your Tab key, select **Change** and click **Enter** to change the IP configuration.
4. Enter the new IP address, subnet mask, and default gateway IP address for your Barracuda Web Filter. Select **Save** to enter your changes. The Primary DNS and Secondary DNS files are optional. Select **Exit**.

   The new IP address and network settings are applied to your Barracuda Web Filter.

Step 4. Configure your corporate firewall

If your Barracuda Web Filter is located behind a corporate firewall, refer to *Table 2.1* for the ports that need to be opened on your corporate firewall to allow communication between the Barracuda Web Filter and remote servers.

Table 2.1: Ports to Open on Your Corporate Firewall

Port	Direction	Protocol	Description
22	In/Out	TCP	Remote diagnostics and technical support services
25	Out	TCP	Email and email bounces
53	Out	TCP/UDP	DNS (Domain Name Server)
80	Out	TCP	Virus, spyware, category definition updates, and firmware updates
123	In/Out	UDP	NTP (Network Time Protocol)
8000	Out	TCP	See Step 5. Configure the Barracuda Web Filter on page 20.
8001, 8002	In/Out	TCP	Synchronization between linked systems. For more information, see Setting up linked management on page 32.

In addition to the ports listed above, you may have to configure your corporate firewall to allow the Barracuda Web Filter to email system alerts and reports. Some organizations create firewall rules that only allow emails to be sent from the IP address of their email server. In this case, you should configure your corporate firewall to allow emails to be sent from the Barracuda Web Filter as well.

If your Barracuda Web Filter is located in a DMZ, you may need to configure your corporate firewall to allow the Barracuda Web Filter to send notifications to your internal email server.

Step 5. Configure the Barracuda Web Filter

After specifying the IP address of the Barracuda Web Filter and opening the necessary ports on your corporate firewall, configure the Barracuda Web Filter from the administration interface. Make sure the client's computer that you configured the Barracuda Web Filter for is connected to the same network and that the appropriate routing is in place to allow connection to the Barracuda Web Filter's IP address via a Web browser.

To configure the Barracuda Web Filter:

1. From a Web browser, enter the IP address of the Barracuda Web Filter followed by port 8000.

   For example: `http://192.168.200.200:8000`.

2. To log into the administration interface, enter **admin** for the username and **admin** for the password.

3. Select **BASIC > IP Configuration**, and perform the following steps:

   3a. Enter the IP address of your primary and secondary DNS servers (if these have not yet been set up).
   3b. Set **Operating Mode** to **Audit**.
   3c. Set **Enable Perimeter Transparency** to one of the following depending your type of deployment:
   - For Inline Pass-Through deployment, select **Yes** to expose the IP addresses of your clients instead of allowing all HTTP traffic coming from the Barracuda Web Filter.
   - For Forward Proxy deployment, select **No**.

   3d. (Optional) Configure any static routes.
   3e. Click **Save Changes**.

   Note: If the IP address of your Barracuda Web Filter on the **IP Configuration** page is changed, you are disconnected from the Web interface. If this occurs, log in again using the new IP address.

4. Select **BASIC > Administration**, and perform the following steps:

   4a. Assign a new administration password to the Barracuda Web Filter (optional). This step is highly recommended.
   4b. Make sure the local time zone is set correctly.

   Time on the Barracuda Web Filter is automatically updated via NTP (Network Time Protocol). It requires that port 123 is opened for inbound and outbound UDP (User Datagram Protocol) traffic on your firewall (if the Barracuda Web Filter is located behind one).

   It is important that the time zone is set correctly because this information is used to determine the delivery times for messages and is displayed in certain mail reading programs.

   4c. If desired, change the port number used to access the Barracuda Web Filter administration interface. The default port is 8000.
   4d. Enter the amount of time for the session expiration length (in minutes) of your administration interface session.

   At expiration, you are required to log back into the administration interface.

   4e. (Optional) Specify your local SMTP server. Enter the email address for your Administrator to receive system and threat email alerts and notifications.
   4f. Click **Save Changes**.

Step 6. Update the Barracuda Web Filter firmware

To update the firmware on the Barracuda Web Filter:

1. Select **ADVANCED > Firmware Update**.

2. Read the release notes to learn about the latest features and fixes provided in the new firmware version.

3. Click **Download Now** next to Latest General Release. Click **OK** on the download duration window.

Updating the firmware may take several minutes. Do not turn off the unit during this process.

Download Now is disabled if the Barracuda Web Filter is already up-to-date with the latest firmware version.

The Barracuda Web Filter begins downloading the latest firmware version. You can view the download status by clicking **Refresh**. A message displays once the download is complete.

4. Click **Apply Now** when the download completes.
5. Click **OK** when prompted to reboot the Barracuda Web Filter.

   A Status page displays the progress of the reboot. Once the reboot is complete, the login page appears.

Step 7. Verify your subscription status

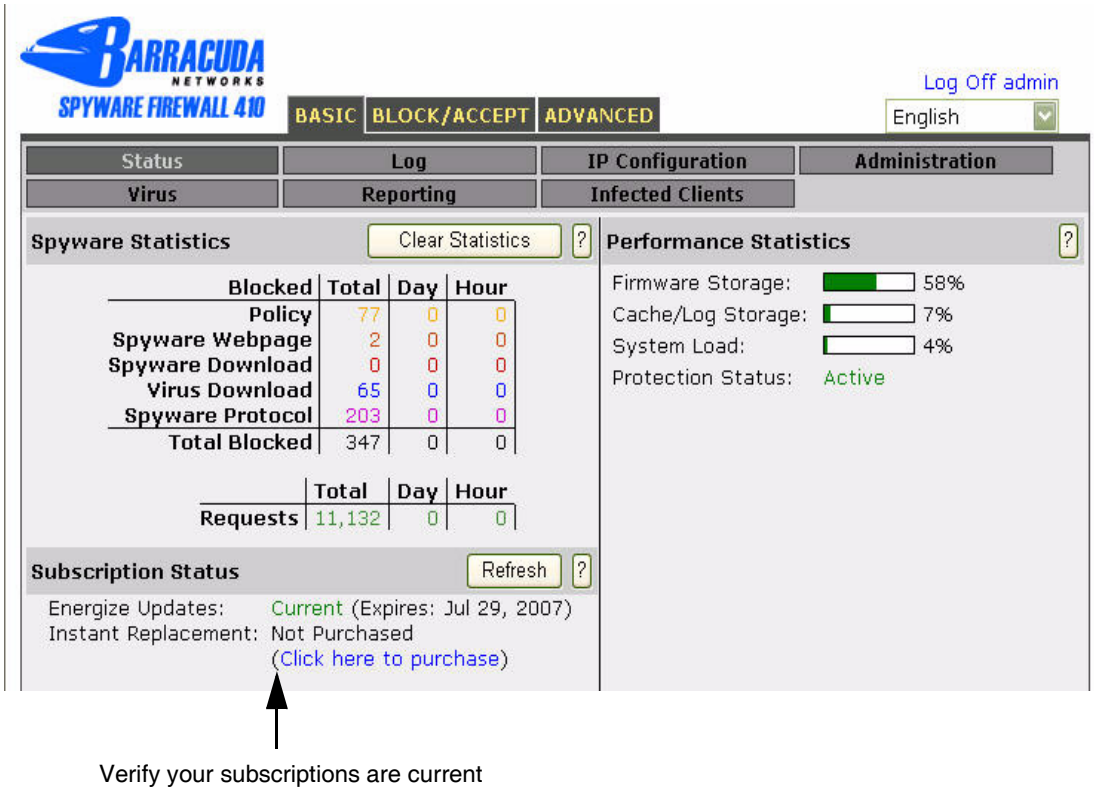
After you install the Barracuda Web Filter, your Energize Update and Instant Replacement subscriptions are most likely active. However, it is important you verify the subscription status so your Barracuda Web Filter can continue to receive the latest virus and spyware updates from Barracuda Central. The Energize Update service is responsible for downloading these virus and spyware definitions to your Barracuda Web Filter.

To check your subscription status:

1. Select **BASIC > Status**.
2. From the **Subscription Status** section, verify that the word *Current* appears next to **Energize Updates** and **Instant Replacement Service** (if purchased).

Figure 2.2 shows the location of the **Subscription Status** section.

Figure 2.2: Subscription Status



3. Enable your subscription:

   3a. Click the **Activate** link as shown in *Figure 2.3*. The product activation displays in a new browser window.

Figure 2.3: Location of the Activate Link

   3b. In the **Product Activation** window, fill in the required fields and click **Activate**. A confirmation page opens to display the terms of your subscription.

   3c. After a few minutes, from the Barracuda Web Filter administration interface, click **Refresh** in the **Subscription Status** section of the **BASIC > Status** page. The status of your subscriptions displays as **Current**.

Note: If your subscription status does not change to **Current**, or if you have trouble filling out the **Product Activation** window, call your Barracuda Networks sales representative.

Step 8. Update the definitions

To update the spyware, virus, and category definitions:

1. Select **ADVANCED > Energize Updates**.
2. Check to see if the current version is the same as the latest version available for spyware, virus, and category definitions. If the definitions are up-to-date, proceed to Step 9.
3. Click **Update** for each of these sections.
4. In the spyware, virus, and category definition sections, select **Hourly** or **Daily** for Automatically Update. The recommended setting is **Hourly** for both spyware and virus definitions, and **Daily** for category definition.
5. Click **Save Changes**.

Step 9. Integrate the Barracuda Web Filter into your network

Table 2.2 describes how to integrate the Barracuda Web Filter into your network depending on your deployment type.

Table 2.2: Integrating your Barrauda System into your Network

Deployment Type	Next Step
Inline pass-through	Connect your Barracuda Web Filter to your network. For more information, see Connecting the Barracuda Web Filter to your network on page 24.
Forward proxy	Configure your clients' HTTP proxy settings from their browser to access the Internet. See your Web browser's technical documentation for further information.

Step 10. Test and adjust the Barracuda Web Filter

After connecting your Barracuda Web Filter to the network, verify connectivity. Open your Web browser from a machine on your network. If you cannot browse the Web, review the installation steps to make sure your Barracuda Web Filter is properly configured and connected to your corporate firewall and network switch.

If you can browse the Web without any issues, you are ready to adjust the settings on the Barracuda Web Filter. The most common adjustment to make is to create filters that determine what traffic and applications the Barracuda Web Filter blocks and accepts. For more information about the available filters, refer to Creating block and accept filters on page 36.

Go to the **BLOCK/ACCEPT > IP Block/Exempt** page, and use the **IP and Port Exemption** section to bypass scanning or filtering for clients or targeted servers. To avoid accidentally specifying a broader than intended an exemption range, be sure to apply the proper subnet mask.

Connecting the Barracuda Web Filter to your network

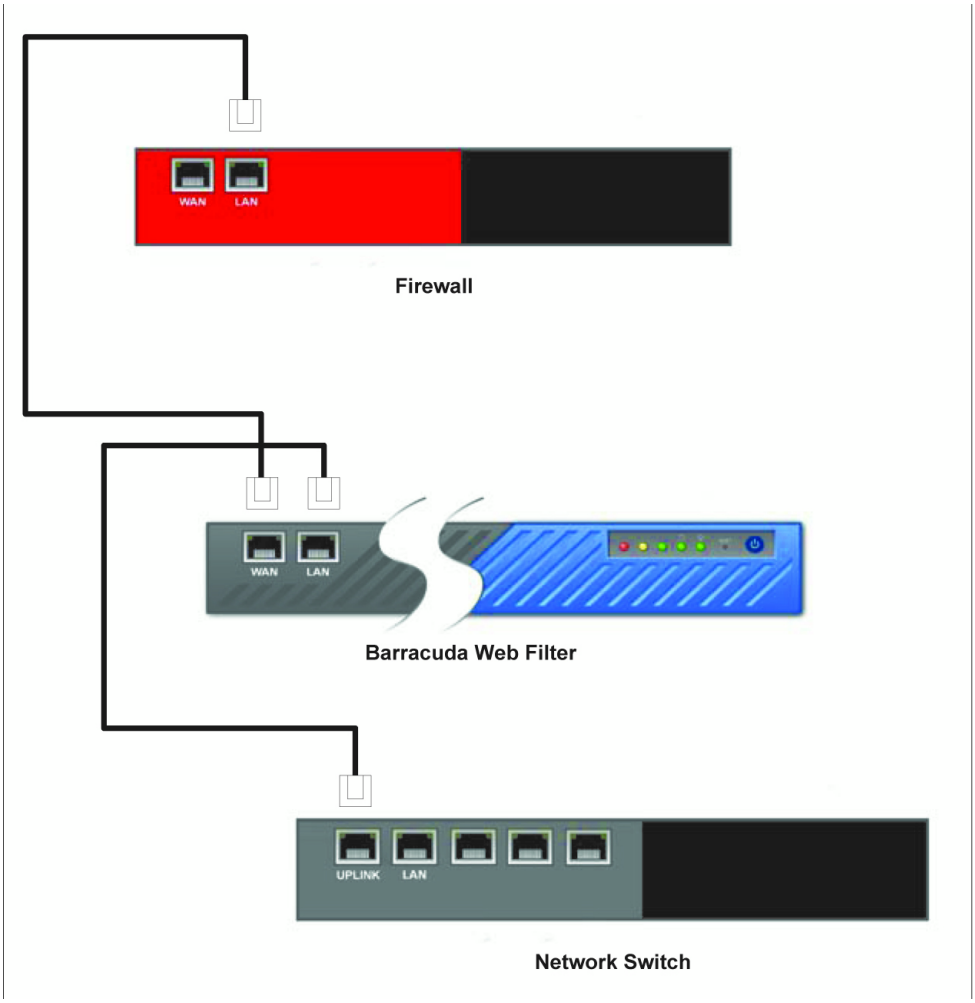
To connect the Barracuda Web Filter to your network:

1. Connect the Ethernet cable from your corporate firewall to the WAN port on the front panel of the Barracuda Web Filter. This step may require disconnecting your internal network switch from the corporate firewall.

   Note: A crossover cable may be needed if your corporate firewall does not have a switchable port and therefore cannot switch between RX and TX. Another solution is to place a switch between the corporate firewall and the Barracuda Web Filter.

   Note: You do not need to configure the WAN port. The Barracuda Web Filter creates an Ethernet bridge between the WAN and LAN ports.

Figure 2.4: Connecting the Barracuda Web Filter to your Network



2. Connect an Ethernet cable from the LAN port on the Barracuda Web Filter to your internal network switch Uplink port (if one is available).

   Note: If your switch records the MAC address of an external device, make sure you delete all pre-existing MAC address records from your switch.

3. Select **BASIC > IP Configuration** page in the administration interface, and set the Operating Mode setting to **Active**.

   Note: A hard bypass feature is available on the Barracuda Web Filter 310 and higher models.

4. If necessary, set up static routes on the **BASIC > IP Configuration** page. Setting up static routes is often necessary in complex networks so the Barracuda Web Filter knows the proper way to route traffic on your network.

Advanced installation topics

This section describes advanced installation topics that may apply to your Barracuda Web Filter deployment.

Inline pass-through with pre-existing proxy deployment

Another deployment type that is much less common than either Inline mode or Forward Proxy mode is using the Barracuda Web Filter as an inline device that uses a pre-existing proxy server on your network. This type of deployment is not recommended because it breaks the following features of the Barracuda Web Filter:

- Infection reports do not display the IP addresses of infected clients.
- Infected clients cannot be automatically redirected to the Barracuda Spyware Removal Tool.

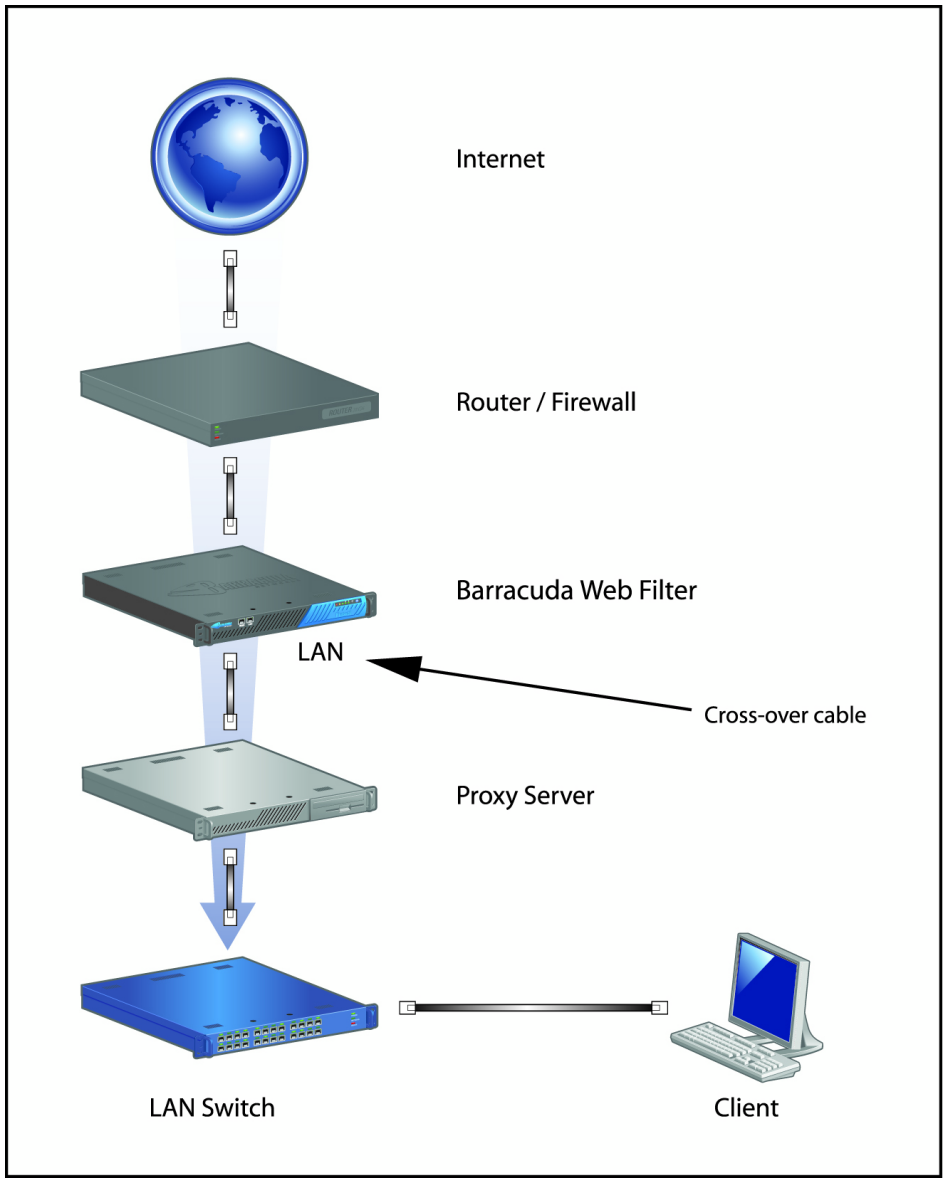
To resolve these issues, we recommend that you remove your pre-existing proxy server and deploy the Barracuda Web Filter as described in Inline pass-through (transparent) mode on page 11.

If you choose to deploy your Barracuda Web Filter with a pre-existing proxy server, place the Barracuda Web Filter directly between your Internet firewall/router and your LAN router/switch that connects to all your client machines. The Barracuda Web Filter is also configured to interact with and scan the traffic from your pre-existing proxy server. The placement of your pre-existing proxy server and its functionality may have an impact on the Barracuda Web Filter deployment. Some configurations may require technical assistance from Barracuda Technical Support.

In this deployment, the Barracuda Web Filter detects all network traffic. The proxy server connects directly to the Barracuda Web Filter LAN port. This connection may require a crossover cable. No special port or IP address is required. The Barracuda Web Filter scans for all inbound and outbound HTTP traffic from the proxy server. All outbound traffic on other ports is scanned for normal spyware communication.

Figure 2.5 illustrates this deployment type.

Figure 2.5: Inline Passthrough with Pre-existing Proxy Server Deployment



Supported pre-existing proxy types

Inline pass-through with proxy filtering requires client traffic to pass through the proxy server. Only traffic from the proxy IP address is visible to the Barracuda Web Filter. The Barracuda Web Filter checks each request to determine whether it is allowed or denied. The operation of a proxy can be classified as being a transparent proxy or a nontransparent proxy. Each proxy type provides its own set of installation issues when installing the Barracuda Web Filter.

- **Transparent Proxies:** Transparent deployment of a proxy server relies on a network device (like a switch or a router) to intercept all traffic from clients to Internet servers and divert it to a proxy server.

  The network device identifies packets to be intercepted by examining IP headers of all incoming packets. Packets transported by TCP and addressed to port 80 are intercepted. Because HTTP communication occurs over TCP transport and an overwhelming majority of Internet servers use

the default port 80, this method captures most of the HTTP request traffic flowing through the network device.

If you are installing a transparent proxy, the Barracuda Web Filter must be installed on the client side of the proxy. This position allows the Barracuda Web Filter to intercept all Internet traffic.

- **Nontransparent Proxies:** Nontransparent proxy deployment refers to a deployment where the client is made aware of the proxy server's existence. Then clients send their HTTP requests to the proxy regardless of the servers specified in the URLs.

  In addition to document retrieval, these clients also delegate DNS resolutions to the proxy server, and a browser sends to its proxy server the entire requested URL.Then if needed, the proxy server resolves the hostname into an IP address and retrieves the object from that address. This is different from the actions of clients accessing the Web directly. When accessing the Web directly, the client obtains the origin server's IP address and sends the HTTP request containing just the path portion of the URL to that address.

Connecting inline to your network with a pre-existing proxy server

To set up the Barracuda Web Filter inline with your existing proxy server, place the proxy server between the Barracuda Web Filter and your internal network switch.

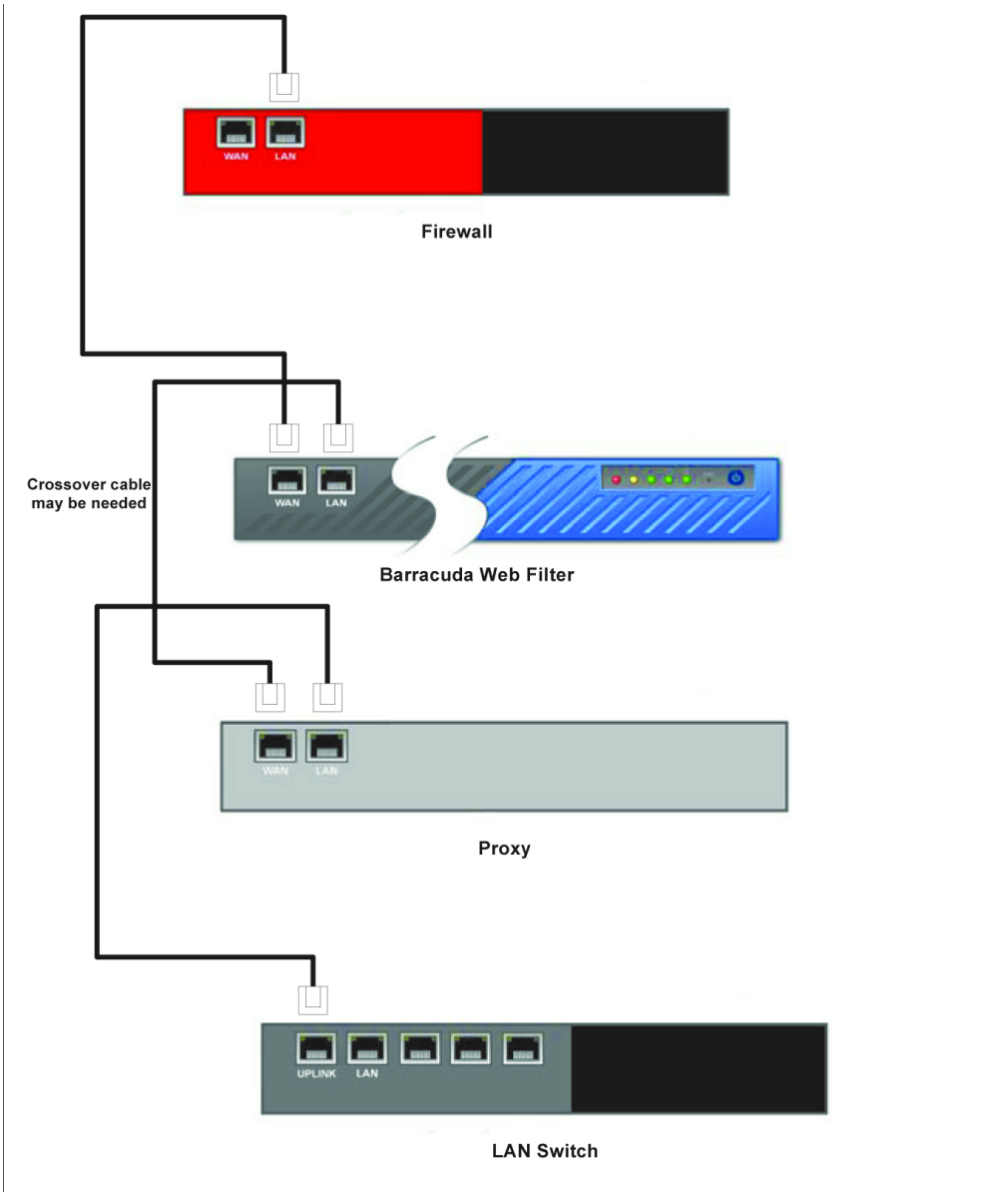
If you have a proxy server, most HTTP requests are routed from your internal network through the proxy server to the Barracuda Web Filter. When a Web site responds, the responding traffic goes through the Barracuda Web Filter, which filters any spyware and viruses before allowing the traffic to go through the proxy server and back to the clients.

The Barracuda Web Filter has been tested with Microsoft ISA and Squid proxy servers.

To connect your Barracuda Web Filter and existing proxy server to your network:

1. Connect your LAN port from your proxy server to the **Uplink** port of your internal network switch.

Figure 2.6: Proxy Behind the Barracuda Web Filter



2. Connect the Ethernet cable from your **WAN** port of your proxy server to the **LAN** port on the front panel of the Barracuda Web Filter.

   Note: A crossover cable may be needed if your corporate firewall does not have a switchable port and therefore cannot switch between RX and TX. Another solution is to place a switch between the corporate firewall and the Barracuda Web Filter.

   Note: You do not need to configure the WAN port. The Barracuda Web Filter creates an Ethernet bridge between the WAN and LAN ports.

3. Connect an Ethernet cable from the **WAN** port on the Barracuda Web Filter to the **LAN** port on your firewall.

4. Select **BASIC > IP Configuration** page in the administration interface, and set the **Operating Mode** setting to **Active**

Chapter 3

Configuring, Monitoring, and Managing the Barracuda Web Filter

This chapter describes the configuration, monitoring, and management tasks you can perform from the administration interface. The following topics are covered:

Configuring the Barracuda Web Filter *32*
Creating block and accept filters *36*
Monitoring the Barracuda Web Filter *43*
Managing the Barracuda Web Filter *48*

For more detailed information about a specific page in the Web interface, view the online help by clicking the question mark icon on the right side of the interface.

Configuring the Barracuda Web Filter

This section describes the configuration tasks you can perform from the administration interface. This section covers the following topics:

Configuring system IP information 32
Setting up linked management 32
Controlling access to the Web interface 34
Customizing the appearance of the Web interface 34
Changing the language of the Web interface 34
Setting the time zone of the system 34
Enabling and disabling virus protection 35
Enabling and disabling Web caching 35
Setting up a syslog server to centrally monitor system logs 35

Configuring system IP information

The **BASIC > IP Configuration** page contains the network configuration for your Barracuda Web Filter. Use this page to change the following settings:

- System IP address and domain configuration
- DNS servers
- Client IP Visibility for HTTP—Specifies whether the Barracuda Web Filter is to expose client IP Addresses in egress HTTP traffic. If you change this setting to **No**, all HTTP traffic passing through the system will have the IP address of the Barracuda Web Filter.
- Static routes

Setting up linked management

Use the **ADVANCED > Linked Management** page to link multiple Barracuda Web Filters together so they can synchronize configuration settings. Linked systems can be geographically dispersed and do not need to be co-located on the same network. Linked management does *not* provide load-balancing functionality. The Barracuda Web Filter uses ports 8001 and 8002 to synchronize configuration between linked systems.

Linked Management is available on the Barracuda Web Filter 410 and above.

Note: Some network environments may not be suitable to linking multiple Barracuda Web Filter systems together. For example, if you have multiple network segments that each require different policies, it may be better to provide a dedicated, unlinked Barracuda Web Filter for each segment. This way you can configure each Barracuda Web Filter without the configuration settings propagating to the other systems.

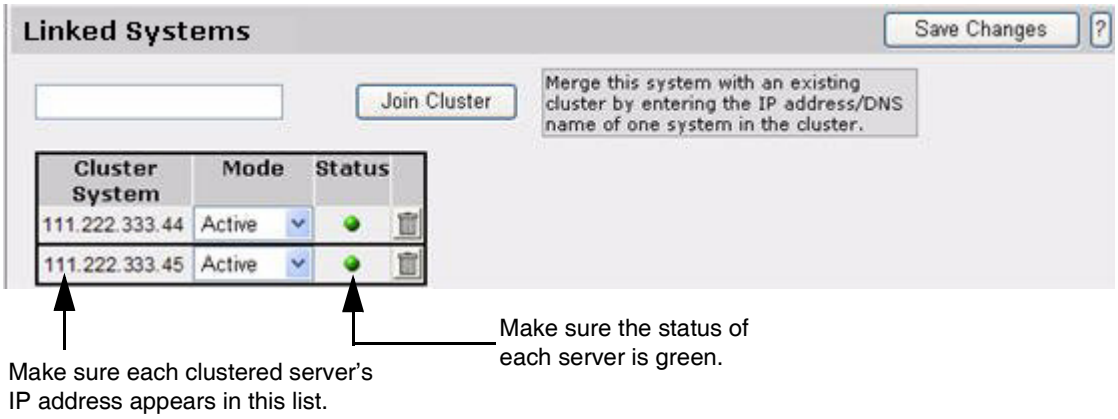
To link two Barracuda Web Filter devices:

1. Complete the installation process for each system as described in *Chapter 2 Installation and Configuration*.
2. From the **ADVANCED > Task Manager** on Barracuda Web Filter 1, verify that no processes are running. Complete this step for the Barracuda Web Filter 2 as well. No processes should be running when you link systems together.
3. From the **ADVANCED > Linked Management** page on Barracuda Web Filter 1, enter the Cluster Shared Secret password, and click **Save Changes**.

4. From the **ADVANCED** > **Linked Management** on Barracuda Web Filter 2:
   - 4a. Enter the Cluster Shared Secret password and the Cluster Hostname. Click **Save Changes**.
   - 4b. In the Linked Systems section, enter the IP address of the first Barracuda Web Filter, and click **Join Cluster**.
   - 4c. Click **Save Changes**.
5. Refresh the **ADVANCED > Linked Management** page, and verify that:
   - Each system's IP address appears in the **Linked Systems** list.
   - The status of each server is green.

Figure 3.1 shows two servers in a cluster with a green status.

Figure 3.1: Two Server Cluster


Linked Systems
Save Changes
Join Cluster
Merge this system with an existing cluster by entering the IP address/DNS name of one system in the cluster.
Cluster System
Mode
Status
111.222.333.44
Active
111.222.333.45
Active
Make sure each clustered server's IP address appears in this list.
Make sure the status of each server is green.

6. If you have a load balancing device, configure the device to balance the load on each linked system.

Data propagated to the linked systems

Linking systems together not only makes it easier to manage multiple Barracuda Web Filters, but it also provides 100 percent redundant coverage of the propagated data. *Table 3.1* identifies the data that is propagated to the other clustered systems when a new system joins.

Table 3.1: Data Propagated Between Linked Systems

Propagated Data	Data Not Propagated
System settings (global and domain) configured through the Administration interface. This includes the block/accept filters.	• System IP configuration (IP address, subnet mask, default gateway, and DNS server) configured on the **BASIC > IP Configuration** page. • System password and time zone as configured on the **BASIC > Administration** page. • Cluster hostname and cluster local host map configured on the **ADVANCED > Linked Management** page.

Switching a system to standby mode

You can also use the **ADVANCED > Linked Management** page to switch a clustered system from Active to Standby mode. When a system is in standby mode, it does not synchronize its configuration with the other active systems in the cluster.

We recommend switching a system to Standby mode when you need to:

- Upgrade the firmware of all systems in a cluster. If a system is part of a cluster, we recommend changing the system's mode to Standby before you upgrade its firmware, and then repeat this process on each system in the cluster. Once the firmware on each system has been upgraded, you can then change the mode on each system back to Active.

  Changing a linked systems to standby mode before upgrading prevents a system on a more recent firmware version from trying to synchronize its configuration with a system on an earlier firmware version.
- Perform maintenance that requires a system to be powered down or disconnected from your network. For example, if you need to physically move a Barracuda Web Filter you should change its mode to Standby so the other systems in the cluster do not try to synchronize their configuration while the system is down.

Controlling access to the Web interface

Use the **BASIC > Administration** page to perform the following tasks:

- Specify the IP addresses or subnet mask for the systems that you want to access the administration interface. All other systems will be denied access.
- Change the password of the administration account.
- Change the port used to access the administration interface.
- Change the length of time users can be logged into the administration interface (default is 60 minutes).

Customizing the appearance of the Web interface

Use the **ADVANCED > Appearance** page to customize the default images used on the administration interface and in the email quarantine messages sent to users. This tab is only displayed on the Barracuda Web Filter 410 and above.

Changing the language of the Web interface

You can change the language of the administration interface by selecting a language from the drop-down menu in the upper right corner of the window. Supported languages include Chinese, Japanese, Spanish, French, and others.

The language you select is only applied to your individual administration interface. No other user's administration interface is affected.

Setting the time zone of the system

Use the **BASIC > Administration** page to set the time zone of your Barracuda Web Filter.

Enabling and disabling virus protection

Use the **BASIC > Virus Checking** page to turn off virus scanning, which is not recommended. By default, virus scanning is automatically enabled, and the virus definitions are updated on a regular basis (hourly by default) using Energize Updates.

When virus scanning is enabled, all traffic processed by the Barracuda Web Filter is scanned for viruses and any traffic that contains a virus is blocked.

Enabling and disabling Web caching

Use the **ADVANCED > Caching** page to enable or disable Web caching. Web caching can accelerate Web page downloads and also reduce the traffic on the external network connections. For these reasons, we recommend you keep Web caching enabled.

Setting up a syslog server to centrally monitor system logs

Use the **ADVANCED > Syslog** page to specify a server to which the Barracuda Web Filter sends syslog data. Syslog is a standard UNIX/Linux tool for sending remote system logs and is available on all UNIX/Linux systems.

Syslog servers are also available for Windows platforms from a number of free and premium vendors. Barracuda Networks has tested with a Windows freeware syslog server from Kiwi Enterprises (www.kiwisyslog.com). Barracuda Networks makes no guarantees that your Barracuda Web Filter will be completely compatible with this syslog server.

Syslog support is not available on the Barracuda Web Filter 210.

Creating block and accept filters

This section describes the **BLOCK/ACCEPT** tab, which provides a wide range of filters that enhance the default spyware and virus detection capabilities of the Barracuda Web Filter.

This section contains the following topics:

Best practices 36
Filtering and blocking features 37
- Content filtering 37
- Application filtering 37
- Domain filtering 38
- URL pattern filtering 38
- Custom categories filtering 38
- MIME type blocking 39
- IP-based filtering 39
- IP-based exemption from filtering and blocking 39

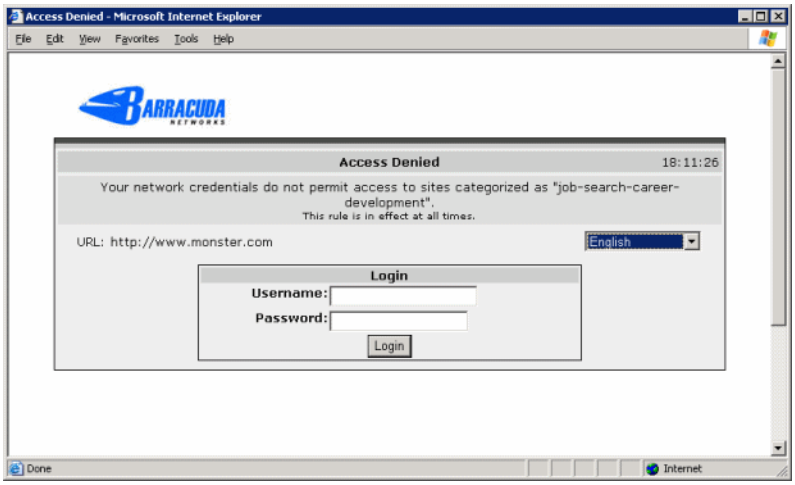
Block messages 39
Exception policies 40
HTTPS filtering option 41
Testing Web site access 42

Best practices

When creating block or accept filters, keep the following best practices in mind:

- You can apply domain, pattern, content, application, and MIME type blocking filters to authenticated and unauthenticated users. Before you create or modify a filter, make sure to use the drop-down menu on the right side of the interface to select which type of user you want the filter applied to.
- Use exception policies to override a filter on per-user or group basis. For example, if you configure your content filters to block access to auction sites for both authenticated and unauthenticated users but a member of your Purchasing department requires access to these sites, you can create an exception policy that allows access to only this individual.
- When a user tries to access content that is blocked by one of the Barracuda Web Filter filters, the user receives a block message that contains login fields (shown in *Figure 3.2*). If you want to hide the login fields because you have not created any exception policies that allow users to bypass the block filter, go to the **BLOCK/ACCEPT > Block Messages** page and change the **Enable login override of block pages** setting to **No**.

Figure 3.2: Block Message with Login Fields



Filtering and blocking features

This section describes the filtering and blocking features of the Barracuda Web Filter:

- Content filtering
- Application filtering
- Domain filtering
- URL pattern filtering
- Custom categories filtering
- MIME type blocking
- IP-based filtering
- IP-based exemption from filtering and blocking

Content filtering

Use the **BLOCK/ACCEPT > Content Filter** page to select categories of Web sites that should be blocked, warned, monitored, or allowed. When you block a category, you block all HTTP traffic to the associated URLs in that category.

For example, *http://mail.yahoo.com* is categorized as a Web-based Email site. If you want to block users from accessing their Web-based email accounts, block the Web-based Email category.

You can also use this page to turn on Safe Search mode for common Web search engines. Safe Search prevents a Web search engine from displaying objectionable thumbnail images in search results. Google, Yahoo, MSN, and Dogpile all allow users to control whether Safe Search mode is applied to their image searches. However, when you enable Safe Search mode through the Barracuda Web Filter, users cannot override the setting when conducting image searches, and only filtered thumbnails are displayed in their search results.

Application filtering

Use the **BLOCK/ACCEPT > Applications** page to block or allow specific Instant Messenger services and other types of applications. For a user to download or use an application, the user's application needs to communicate with an external server. When you select to block an application, the Barracuda Web Filter searches for traffic that contains data associated with an application server and then blocks that traffic.

You can use the Applications filter as a pre-emptive measure to protect your network against malware.

For example, you may want to block the IRC application because this type of application often introduces BOTS into networks. BOTS are automated programs that repeatedly run specific tasks, and malicious BOTS activity is common in IRC communications.

You can also use the application blocking feature when you hear about a virus spreading over a specific IM service or tool. In this case, you can proactively protect your network from the infection by blocking that particular service until the threat has been resolved.

Domain filtering

Use the **BLOCK/ACCEPT > Domains** page to block (blacklist), warn, monitor, or allow (whitelist) traffic to specific domains and subdomains.

URL pattern filtering

Use the **BLOCK/ACCEPT > URL Patterns** page to enter regular expressions or keyword that, if matched to a URL, will block (blacklist), warn, monitor, or allow (whitelist) that URL. For more information about using regular expressions, refer to *Appendix B*, Regular Expressions on page 73.

Examples:

- If you want to block all Web sites that contain *porn* in the URL, then enter *porn* as a blocked pattern.
- Sometimes spyware applications use different hostnames but the same domain name so the URLs appear to be from different hosts. In this case you can enter the domain name as a pattern to block all URLs on that domain.
- Another example is if you want to allow access to *example.com* but want to block *maps.example.com*. In this case, specify *example.com* as an allowed pattern and specify *maps.example.com* as a blocked URL (see Domain filtering on page 38).

Tip: Run a test on your regular expressions with special characters before you encode them in a pattern filter.

Custom categories filtering

Use the **BLOCK/ACCEPT > Custom Categories** page to create a custom filter, which can consist of the domain names or built-in Web content categories you select.

Note: You can select a maximum of three built-in categories per custom category.

Custom categories are used in the same way as the built-in filters:

- You can apply a custom category to either authenticated or unauthenticated users.
- You can define a user- or group- specific exception rule to a custom category policy.

After you define a custom category, allow between five and ten minutes for the Barracuda Web Filter to compile and then fully activate the new category. To verify that a newly created custom category is active, you can use the **Content Filter Lookup** facility in the **Content Filter** page, as described in the online help for the **Custom Categories** page.

MIME type blocking

Use the **BLOCK/ACCEPT > MIME Blocking** page to specify standard MIME types that you want to block.

Note: Web sites that are whitelisted are not subject to the MIME type blocking rules you create.

Many organizations choose to block Internet radio and streaming media because they add load to the internal network, as well as executable files because they can install viruses and various other malware. To block Internet radio, which uses MPEG (.mpg, mpega, or .abs) or Microsoft audio (.wav) files, enter *audio/x-mpeg* or *audio/x-wav* as blocked MIME types.

To block streaming media, which uses MPEG video, enter *video/mpeg* or *video/x-msvideo* as blocked MIME types.

To block access to executables (.exe), enter *application/octet-streamapplications* as a blocked MIME type.

IP-based filtering

If you suspect that certain users are abusing their access to the Internet or using malicious applications, you can use the **BLOCK/ACCEPT > IP Block/Exempt** page to deny Internet access to those users or to block them from using certain applications.

Use the source IP address or source subnet mask fields to specify the systems that you want to prevent from accessing the Internet. Use the destination fields to specify the applications you want to block.

IP-based exemption from filtering and blocking

Use the **BLOCK/ACCEPT > IP Block/Exempt** page to specify the IP addresses that you want to bypass the following block filters:

- Content filtering
- IM blocking
- All types of download blocking

Note: The IP addresses you add to the exempted list will not be protected against spyware, but the Barracuda Web Filter will still detect spyware activity on these clients.

Block messages

When the Barracuda Web Filter blocks access to a Web site, it displays a message that informs the user why that site is being blocked. The Barracuda Web Filter blocks a Web site if it contains spyware, a virus, content that has been blocked, or a blacklisted URL.

Use the **BLOCK/ACCEPT > Block Messages** page to perform the following tasks:

- Select the language that the block message is displayed in for all users.
- Customize the message in case the default text is insufficient.
- Select whether login fields appear on the block messages window that users receive when they try to access blocked content. The login fields allow users to access blocked content if an exception policy has been created for the blocking filter.
- Enable the Barracuda Spyware Removal Tool by setting the **Infection Warning Threshold** field to greater than 0.
- Set a dedicated hostname for the Barracuda Spyware Removal Tool.

About the Barracuda Spyware Removal Tool

The Barracuda Spyware Removal Tool performs a comprehensive scan of your computer for any traces of spyware or other malware. This scan is very thorough and takes several minutes to complete. After the analysis is complete, you can remove all the malware and traces of malware that have been found.

The Barracuda Spyware Removal Tool detects and removes many small traces, cookies, potential spyware files, and temporary files from your computer. Although these files are normally harmless, removing them can cause some Web sites to malfunction, and it is generally not appropriate that the Barracuda Web Filter block them at the network level. As such, the Barracuda Spyware Removal Tool may identify potential files for removal from your computer that are not blocked at the network level by the Barracuda Web Filter.

For maximum security, complete removal of these files from your computer is recommended.

Use the **Infection Warning Threshold** field to configure whether your users are prompted to run the Barracuda Spyware Removal Tool when spyware is detected on their system. By default, the Barracuda Spyware Removal Tool is disabled.

Note: We recommend that you keep the Infection Warning Threshold field set to **0** in Network Address Translation (NAT) environments because the Barracuda Web Filter uses the IP address to identify an infected system. As a result, if one system becomes infected with spyware, then all systems in the NAT environment are prompted to use the Barracuda Spyware Removal Tool regardless of their infection status. This issue can occur when you deploy the Barracuda Web Filter with a pre-existing proxy server.

Enabling the Barracuda Spyware Removal Tool

To enable users to run the Barracuda Spyware Removal Tool:

1. Clear the Infection Activity log so users are not prompted to run the Barracuda Spyware Removal Tool based on old infection activity data or false positives. To clear the log, go to the **BASIC > Infection Activity** page and click **Clear**.
2. Return to the Block Messages page, and enter a value greater than 0 in the **Infection Warning Threshold** field. When the number of infection activities on a user's system exceeds the value of this field, the user is prompted to run the Barracuda Spyware Removal Tool. The user can then select to run the tool immediately or postpone running the tool until the following day.
3. (Optional) Create a dedicated fully qualified hostname for the Barracuda Spyware Removal Tool:
    - 3a. In the **Dedicated Removal Tool Hostname** field, enter a custom fully qualified hostname for the tool.
    - 3b. Add the custom hostname to your DNS server with the following resolving IP address: 172.27.72.27.
4. Click **Save Changes**.

Exception policies

Use the **BLOCK/ACCEPT > Exceptions** page to create exception policies for specific users or groups so they can override the filters that block access to applications and Web sites.

For example, by default the Barracuda Web Filter uses a content filter to block access to game playing sites. If you want to allow users to access gaming sites during non-business hours, create an allow exception policy between the hours of 18:00 (6pm) and 8:00 (8am) for the Content Filter category and Game Playing subcategory.

Or you may want to create an exception policy that allows a subset of your users to access content that is blocked for other users. For example, some organizations configure their content filters to block access to Job Search and Career Development sites like Monster.com. However, your Human Resources department may require access to such sites. In this case, you can create an allow exception for the Job Search and Career Development subcategory and assign the policy to your Human Resources group.

You can create exception policies for the following types of filters:

- Domains
- URL Patterns
- MIME type blocking
- Content
- Applications
- All Web traffic

When a user tries to access content that is blocked by one of the Barracuda Web Filter filters, the user receives a block message containing login fields (shown in *Figure 3.2*). If an exception policy exists for the blocked content, the user can enter the username and password for the account that was assigned to the exception policy. After the user enters the correct account information, the Barracuda Web Filter applies the effective policy for that authenticated user.

HTTPS filtering option

By default, the Barracuda Web Filter does not block or scan SSL (https://) traffic because most Web traffic is non-encrypted. However, you do have the option to enable HTTPS traffic filtering.

Scope of HTTPS traffic filtering

When the HTTPS traffic-filtering option is enabled, filters created using the following mechanisms will block HTTPS traffic:

Content filters (both built-in and custom)—When HTTPS filtering is enabled, content filters specified in the **Content Filters** page and the **Custom Categories** page will also filter HTTPS traffic.

Domain-based filters—When HTTPS filtering is enabled, filters specified in the **Domains** page will also filter HTTPS traffic.

URL pattern filters—When HTTPS filtering is enabled, filters specified in the **URL Patterns** page will also filter HTTPS traffic for which the *hostname portion* of the URL matches.

Blocking exceptions—When HTTPS filtering is enabled, HTTPS traffic is included in any exceptions to the following types of blocking-exception rules that are in effect:

- All Web traffic
- Content category filters (both built-in and custom)
- Domain-based filters
- URL pattern filters

Limitations for HTTPS traffic filtering

When the HTTPS traffic-filtering option is enabled, the following limitations apply:

- If HTTPS access is denied, the user is *not presented with a block page* because the traffic is blocked at Layer 3.
- If HTTPS access *to a particular domain name* is denied, HTTPS access to *any subdomain* of that same domain will also be denied *for the same users*.
- For any filtering policy that is set to **Warn**, the HTTPS request is **Blocked** instead.
- For URL pattern filters, only the *unencrypted portion* of the requested HTTPS URL can be checked for a match with the specified pattern.

To enable the HTTPS traffic-filtering option

To expand your HTTP filtering policies to include HTTPS filtering, enable the **HTTPS Filtering** option in the **BLOCK/ACCEPT > Configuration** page.

Note: Immediately after you enable this option, any client machines that had previously established an HTTPS session are communicating with an IP address and will not be blocked. In this situation, the HTTPS Web site IP address remains in the DNS client resolver cache (as well as in the DNS table on the core router or domain controller) until the DNS request time-to-live (TTL) expires. This can take up to a day or two, depending upon how the HTTPS sites configure TTL.

Testing Web site access

To determine if a specific Web site is allowed or blocked, based on the filters you set up, go to the **BLOCK/ACCEPT > Browse Test** page to perform a URL test.

Enter the URL in the field provided, and click **Go**. If the Web site appears in the display area on that page, then your users will be able to access the site. If you receive a message that the Web site has been blocked, then your users will not be able to access the site.

It is recommended that you make a list of the sites you want to block and allow, and then use the **Browse Test** page to test each URL and verify the filters have been set up correctly.

Monitoring the Barracuda Web Filter

This section describes the monitoring tasks you can perform from the administration interface and from the front panel of the Barracuda Web Filter. This section covers the following topics:

Viewing performance statistics 43
Understanding the indicator lights 43
Viewing the traffic log 44
Viewing the application log 45
Viewing the warned activity list 45
Automating the delivery of system alerts and notifications 46
Generating system reports 46
Viewing a list of infected clients 46
Viewing system tasks 46

Viewing performance statistics

The **BASIC > Status** page provides an overview of the health and performance of your Barracuda Web Filter:

- Filtering statistics (such as threats blocked by the filtering rules, blocked visits to known spyware Web sites, blocked downloads of spyware or viruses) for the past day and hour, as well as total statistics since installation (or last reset) of the Barracuda Web Filter.
- Performance statistics, such as CPU temperature and system load.
- Subscription status for Energize Updates, Instant Replacement, and Premium Support.
- Lists of infected clients blocked Web requests.
- A set of bar graphs that illustrate an hourly breakdown of requests made by your users in the last 24 hours, and a set of bar graphs that illustrate a daily breakdown of requests made by your users in the last 30 days. Both sets of graphs illustrate the following data:
  - Number of requests blocked
  - Number of requests received
  - Number of kilobytes per second used by the requests allowed

  Each bar graph is accompanied by two Top Ten lists: domains represented in the graph and Web content categories represented in the graph.

Performance statistics displayed in red signify that the value exceeds the normal threshold.

Understanding the indicator lights

The Barracuda Web Filter has five indicator lights on the front panel that blink when the system processes HTTP traffic.

Figure 3.3 displays the location of each of the lights.

Figure 3.3: Indicator Lights

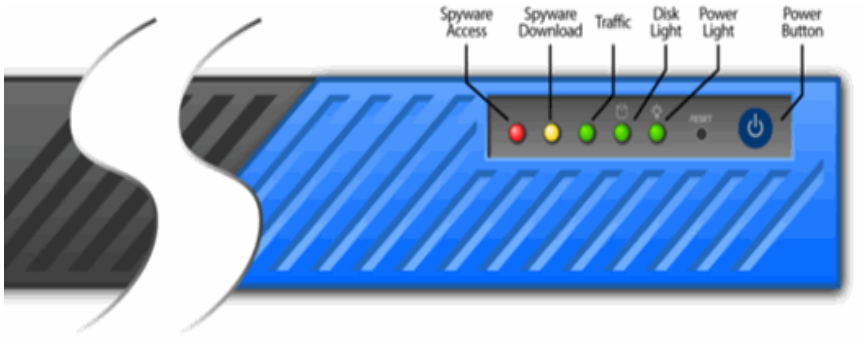


Table 3.2 describes each indicator light.

Table 3.2: Description of the Indicator Lights

Light	Color	Description
Spyware Access	Red	Blinks when the Barracuda Web Filter blocks installed spyware from accessing external sites.
Spyware Download	Yellow	Blinks when the Barracuda Web Filter blocks a spyware application from being downloaded.
Traffic	Green	Blinks when the Barracuda Web Filter processes traffic.
Disk	Green	Blinks during disk activity.
Power	Green	Displays a solid green light when the system is powered on.

Viewing the traffic log

The **BASIC > Log** page displays a list of system logs for your Barracuda Web Filter. On a regular basis you should view the Log page to monitor the Web and spyware traffic (both HTTP and non-HTTP) passing through your Barracuda Web Filter. Use this page to view the following information about each entry in this log:

- Date and time the Barracuda Web Filter processed the request.
- IP address of the client that originated the request.
- IP address of the requested Web site or application
- Type of file contained in the request, as designated by the HTTP header. For a list of common MIME types, see the help page for the MIME Type Blocking feature.
- The user name or group that sent the request.
- The action taken by the Barracuda Web Filter.
- The reason the Barracuda Web Filter performed the action.
- Detailed information about the actions.
- Number of bytes of data processed for this request.

You can perform the following operations on the **Log** page:

- Apply filters to locate specific log entries
- Refresh to update the log. The most recent entry is at the top of the list.
- Clear the log to purge all the current entries.

Viewing the application log

The **BASIC > Application Log** page displays the log of all the Web application traffic processed by the Barracuda Web Filter. Use this page to view the following information about each entry in this log:

- Date and time the Barracuda Web Filter blocked the request.
- IP address of the client that initiated the request.
- Action taken by the Barracuda Web Filter
- Reason the Barracuda Web Filter performed the action.
- Name of the application that was blocked.
- Number of bytes of data processed for the request.

You can perform the following operations in the **Application Log** page:

- Customize the appearance of the display
- Update the contents displayed in this page
- Clear the contents of the traffic log itself
- Filter the entries displayed
- Export the displayed entries to a CSV file

Viewing the warned activity list

The **BASIC > Warned Activity** page displays the list of all warned activity that is in effect for the client machines protected by the Barracuda Web Filter system. Use this page to view the following information about each entry in this log:

- Date and time that the warned activity was triggered.
- IP address of the client machine that triggered the warned activity.
- Username that triggered the warned activity. This field indicates whether the user account is from the local, LDAP or NTLM realm.
- The URL that the user was attempting to access when the warned activity triggered.
- The domain names that triggered the warned activity.
- The Web content category that triggered the warned activity.

You can perform the following operations in the **Warned Activity** page:

- View details about a warned activity
- Clear all warned activity

A warned activity remains in effect until it times out (as configured in the **BLOCK/ACCEPT > Configuration** page) or until it is explicitly removed by the Administrator (using the **BASIC > Warned Activity** page). If the user attempts to access the same Web site after a warned activity times out or is deleted, the user must click the Proceed button to re-acknowledge the warning and then access the Web site again.

Automating the delivery of system alerts and notifications

Use the **BASIC > Administration** page to configure the Barracuda Web Filter to automatically email system alerts to the email addresses you specify.

System alerts notify you when:

- Your Energize Update subscription is about to expire
- New virus definitions are available
- New firmware updates are available
- Your system is low on disk space

Generating system reports

Use the **BASIC > Reports** page to choose from over 30 types of system reports that can help you keep track of spyware-blocking and Web-filtering activity performed by the Barracuda Web Filter. You can either generate a system report on demand, or configure the Barracuda Web Filter to automatically generate the system reports on a daily basis and email the reports to specific email addresses.

Reports are available for the following activity categories:

- Bandwidth use
- Web sites requested or visited
- Web-filtering actions (blocked, warned, or monitored requests)
- Spyware activity
- Actions by hour or by time of day
- User activity
- Spyware and virus downloads

These same reports provide information about the following user-specific or Web-specific categories:

- User activity by time
- User-specific activity
- Domain-specific activity
- Category-specific activity
- Web site-specific activity

For detailed descriptions of the system reports, see the online help for the **Reports** page.

Viewing a list of infected clients

Use the **BASIC > Infection Activity** page to view a list of clients that are infected with a virus or spyware.

You can use this list to determine if any of your clients have been prompted to use the Barracuda Spyware Removal Tool. By default, this tool is disabled but you can enable the tool on the **BLOCK/ACCEPT > Block Messages** page.

Viewing system tasks

The **ADVANCED > Task Manager** page provides a list of tasks that are in the process of being performed and also displays any errors encountered when performing these tasks.

Some of the tasks that the Barracuda Web Filter tracks include:

- Linked management setup
- Configuration restoration

If a task takes a long time to complete, you can click **Cancel** next to the task name and then run the task at a later time when the system is less busy.

The Task Errors section will list an error until you manually remove it from the list. The errors are not phased out over time.

Managing the Barracuda Web Filter

This section describes how to manage and maintain your Barracuda Web Filter using the administration interface.This section covers the following topics:

Backing up and restoring system configuration 48
Updating the Barracuda Web Filter firmware 48
Updating the spyware, virus, and category definitions 48
Replacing a failed system 49
Reloading, restarting, and shutting down the system 49
Using the built-in troubleshooting tools 49
Rebooting the system in recovery mode 50

Backing up and restoring system configuration

The **ADVANCED > Backup** page lets you back up and restore the configuration of your Barracuda Web Filter. You should back up your system on a regular basis in case you need to restore this information on a replacement Barracuda Web Filter or in the event your current system data becomes corrupt.

If you are restoring a backup file on a new Barracuda Web Filter that is not configured, you need to assign your new system an IP address and DNS information on the **BASIC > IP Configuration** page

Note the following about the backup file:

- Do not edit backup files. Any configuration changes you want to make need to be done through the administration interface. The configuration backup file contains a checksum that prevents the file from being uploaded to the system if any changes are made.
- You can safely view a backup file in Windows WordPad or Microsoft Word. You should avoid viewing backup files in Windows Notepad because the file can become corrupted if you save the file from this application.
- The following information is not included in the backup file:
  - System password
  - System IP information
  - DNS information

Updating the Barracuda Web Filter firmware

Use the **ADVANCED > Firmware Update** page to manually update the firmware version of the system or revert to a previous version. The only time you should revert back to an old firmware version is if you recently downloaded a new version that is causing unexpected problems. In this case, call Barracuda Networks Technical Support before reverting back to a previous firmware version.

If you have the latest firmware version already installed, the **Download Now** button is disabled.

Note: Applying a new firmware version results in a temporary loss of service. For this reason, you should apply new firmware versions during non-business hours.

Updating the spyware, virus, and category definitions

Use the **ADVANCED > Energize Updates** page to manually update the current spyware, virus, and category definitions, as well as change the interval at which the Barracuda Web Filter checks for updates. Energize Updates provide the Barracuda Web Filter with the latest definitions.

We recommend that the **Automatically Update** setting for your spyware and virus definitions be set to **Hourly** so your Barracuda Web Filter receives the latest definitions as soon as new threats are identified by Barracuda Central.

Replacing a failed system

Before you replace your Barracuda Web Filter, use the tools provided on the **ADVANCED > Troubleshooting** page to try to resolve the problem.

In the event that a Barracuda Web Filter system fails and you cannot resolve the issue, customers that have purchased the Instant Replacement service can call technical support and receive a new unit within 24 hours.

After receiving the new system, ship the failed Barracuda Web Filter back to Barracuda Networks at the address below. Barracuda Networks Technical Support can provide details on the best way to return the unit.

Barracuda Networks
3175 S. Winchester Blvd
Campbell, CA 95008

Note: To set up the new Barracuda Web Filter so it has the same configuration as your old failed system, restore the backup file from the old system onto the new system, and then manually configure the new system's IP information on the **BASIC > IP Configuration** page. For information on restoring data, refer to Backing up and restoring system configuration on page 48.

Reloading, restarting, and shutting down the system

Use the **System Reset/Shutdown** section on the **BASIC > Administration** page to shutdown, reset, and reload the Barracuda Web Filter.

Shutting down the system powers off the unit. Restarting the system reboots the unit. Reloading the system re-applies the system configuration.

You can also reset the system by pressing the **RESET** button on the front panel of the system. The following actions occur:

- Reboots the system
- Resets the firmware version to the factory setting

Do not press and hold the **RESET** button for longer than a few seconds. Doing so changes the IP address of the system. Pushing and holding the **RESET** button for 5 seconds changes the default IP address to `192.168.1.200`. Holding the button for 12 seconds changes the IP address to `10.1.1.200`.

Using the built-in troubleshooting tools

The **ADVANCED > Troubleshooting** page provides various tools that help troubleshoot network connectivity issues that may be impacting the performance of your Barracuda Web Filter.

For example, you can test the connection between the Barracuda Web Filter to Barracuda Central to make sure it can successfully download the latest virus and spyware definitions. You can also ping devices from the Barracuda system, perform a traceroute from the Barracuda system to a destination server, and other tasks.

Rebooting the system in recovery mode

If your Barracuda Web Filter experiences a serious issue that impacts its core functionality, you can use diagnostic and recovery tools that are available at the reboot menu to return your system to an operational state.

Before you use the diagnostic and recovery tools, do the following:

- Use the built-in troubleshooting tools on the **ADVANCED > Troubleshooting** page to help diagnose the problem.
- Perform a system restore from the last known good backup file.
- Contact Barracuda Networks Technical Support for additional troubleshooting tips.

As a last resort, you can reboot your Barracuda Web Filter and run a memory test or perform a complete system recovery, as described in this section.

To perform a system recovery or hardware test:

1. Connect a monitor and keyboard directly to your Barracuda Web Filter.
2. Reboot the system by doing one of the following:
   - In the Web interface: Go to the **BASIC > Administration** page, navigate to the **System Reload/Shutdown** section, and click **Restart**.
   - At the front panel of the Barracuda Web Filter: Press the **Power** button on the front panel to turn off the system, and then press the **Power** button again to turn the system on.

   The Barracuda splash screen displays with the following three boot options:

   ```
   Barracuda
   Recovery
   Hardware_Test
   ```
3. Use your keyboard to select the desired boot option, and press the **Enter** key.

   You must select the boot option within three seconds after the splash screen appears. If you do not select an option within three seconds, the Barracuda Web Filter starts up in Normal mode (first option).

   For a description of each boot option, refer to Reboot options on page 51.

   Note: To stop a hardware test, reboot your Barracuda Web Filter by pressing the **Ctrl-Alt-Del** keys.

Reboot options

Table 3.3 describes the options available at the reboot menu.

Table 3.3: Reboot Options

Reboot Options	Description
Barracuda	Starts the Barracuda Web Filter in the normal (default) mode. This option is automatically selected if no other option is specified within the first three seconds of the splash screen appearing.
Recovery	Displays the Recovery Console, where you can select the following options: • Perform filesystem repair—Repairs the file system on XFS-based Barracuda Web Filter. Select this option only if the serial number on your Barracuda Web Filter is below 24364; otherwise select the Perform Full System Re-image option. • **Perform full system re-image—**Restores the factory settings on your Barracuda Web Filter and clears out the configuration information. Select this option if the serial number on your Barracuda Web Filter is 24364 or above. • **Enable remote administration—**Turns on reverse tunnel that allows Barracuda Networks Technical Support to access the system. Another method for enabling remote administration is to click Establish Connection to Barracuda Central on the **ADVANCED >Troubleshooting** page. • Run diagnostic memory test—Runs a diagnostic memory test from the operating system. If problems are reported when running this option, we recommend running the Hardware_Test option next.
Hardware_Test	Performs a thorough memory test that shows most memory related errors within a two-hour time period. The memory test is performed outside of the operating system and can take a long time to complete. Reboot your Barracuda Web Filter to stop the hardware test.

Chapter 4
Managing Users and Groups

This chapter explains how to manage users and groups on your Barracuda Web Filter. This chapter covers the following topics:

Overview 54
- About local users 54
- About domain users 54

Creating local users and groups 55
- Creating local user accounts 55
- Creating local groups 55
- Creating IP address groups 55

Integrating with a user authentication service 56
- Enabling LDAP domain user authentication 56
- Enabling NTLM domain user authentication 59

Viewing and managing accounts 61

Overview

The Barracuda Web Filter distinguishes between two basic classes of the users who access Web sites and Web applications from client machines that it has been configured to protect: local users and domain users.

You can apply filtering and blocking policies as well as exception rules to both classes of users.

You can also view the following information about both classes of users:

- Account View
- Traffic Log
- Applications Log
- Warned Activity
- Reports output

Local users are shown as anonymous until they authenticate in the Barracuda Web Filter system by providing login information in order to proceed to a blocked or warned Web page or application.

Domain users are shown as anonymous until they become authenticated in the Barracuda Web Filter system by providing credentials to their respective authentication service that has been integrated with the Barracuda Web Filter. Authenticated domain users are shown by username, client IP address, and group membership.

In some cases, you may need to create local accounts as well as enable your Barracuda Web Filter to look up domain accounts. For example, if your regular employees have LDAP accounts but contract employees do not, then you might need to create local accounts for the contractor employees.

About local users

Local users that you define by listing their existing usernames in the **USERS/GROUPS > New Users** page. The Barracuda Web Filter authenticates these users from its local database. To apply Web filtering policies (and exception rules to your filtering policies) to multiple local users, you can assign local users to **local groups** that you define in the **USERS/GROUPS > Local Groups** page.

You can also create **IP subnet-based groups**, locally define groups of users who access Web sites and Web applications from client machines within specific ranges of IP addresses. Define IP subnet-based groups of local users in the **USERS/GROUPS > IP Groups** page.

For more information, see Creating local users and groups on page 55.

About domain users

The Barracuda Web Filter can authenticate domain users using your existing authentication service. You can integrate the Barracuda Web Filter with any of the following types authentication servers:

- LDAP
- NTLM

Doing so enables you to apply Web filtering policies and policy exceptions to your domain users without having to re-create local accounts for these users.

For more information, see Integrating with a user authentication service on page 56.

Creating local users and groups

This section describes how to create local accounts that you can assign to exception policies. This section contains the following topics:

Creating local user accounts 55
Creating local groups 55
Creating IP address groups 55

Creating local user accounts

Use the **USERS/GROUPS > New Users** page to create new users that the Barracuda Web Filter will authenticate locally from its database. If you want users to be authenticated using your existing user authentication service instead, go to the **Authentication Services** page and enter the information for your authentication server.

Note: Local user accounts cannot be used to log into the administration interface. You can only use the default admin account to log into the administration interface.

If you want a new user account to be a member of a group, be sure the group already exists. If you need to create a group, go to the **USERS/GROUPS > Local Groups** page.

Creating local groups

Use the **USERS/GROUPS > Local Groups** page to create groups for your local users. The most common reason to create a group is so you can apply an exception policy to multiple users at the same time instead of to individual users.

To create a group, enter the group name in the provided field and click **Add**.

To assign an existing user to this group, go to the **Accounts View** page and click **Edit** next to the account that you want to join the group. A user can belong to multiple groups.

Creating IP address groups

The **USERS/GROUPS > IP** page lets you create a group for a single or range of IP addresses. The most common reasons to create an IP group is to apply an exception policy to:

- Multiple users on the same subnet. In this case, enter the subnet mask for the subnet in the provided field.
- A static IP address. In this case, enter the static IP address in the provided field.

After you enter the IP address or subnet mask and click **Add**, you can assign an exception policy to the IP group on the **BLOCK/ACCEPT > Exceptions** page.

Integrating with a user authentication service

You can integrate the Barracuda Web Filter with your existing authentication server to gain the following benefits:

Web filtering policy exceptions can be applied to domain users—If you do not integrate with your LDAP or NTLM authentication server, you can apply filtering policy exceptions only to local users and groups that you create in the **USERS/GROUPS** tab.

Domain users can be authenticated in the Barracuda Web Filter—LDAP users are authenticated when credentials are provided in order to proceed to a blocked or warned Web page or application. NTLM users are authenticated by single sign-on access against the NTLM authentication service.

Authenticated domain users are known by username, client IP address, and group membership:

- Usernames and client IP addresses of authenticated domain users are visible in the **Account View** page (with the exception of NTLM users), the **Log** page, the **Applications Log** page, and in **Reports** output.
- Group membership information about authenticated domain users is available by opening the **Lookup** facility (accessed by clicking **Lookup** in the **USERS/GROUPS > Exceptions** page) and using the **Active Directory User/Group** section of that window.

Domain users that are unauthenticated in the Barracuda Web Filter appear as anonymous users.

Use the **USERS/GROUPS > Authentication Services** page to integrate the Barracuda Web Filter with your existing authentication server:

Enabling LDAP domain user authentication..... *56*
Enabling NTLM domain user authentication..... *59*

Enabling LDAP domain user authentication

If your network uses a Lightweight Directory Access Protocol (LDAP) or Active Directory authentication (AD) server, your LDAP domain users can use the LDAP or AD authentication service to become authenticated in the Barracuda Web Filter system.

To enable LDAP user authentication

To enable LDAP domain user authentication against your LDAP or AD server, go to the **USERS/GROUPS > Authentication Services** page. In the LDAP tab, provide information about connecting to the LDAP server, binding to the LDAP server, and the encryption type.

About the optional Barracuda DC Agent software

If your LDAP directory authenticates against a domain controller running **Windows Server 2003** with **Service Pack 1** (SP1), you can enable the Barracuda Web Filter to recognize your LDAP domain users whenever those users authenticate against the LDAP domain controller server. To enable the Barracuda Web Filter to transparently track user login activity in your Windows domains, install the **Barracuda DC Agent** software on each relevant LDAP domain controller server, and configure each relevant Barracuda Web Filter to communicate with each DC agent.

Note: If this feature is not enabled (or cannot be supported by your domain controller), an LDAP domain user surfs anonymously until providing credentials for a second time, in order to proceed past a blocked or warned Web activity.

Communication between the LDAP domain controller servers and the Barracuda Web Filters in your network enable the Barracuda Web Filter to *transparently track user login activity* in your LDAP domains. This communication is managed by the following software components:

Domain controller audit policies—The local audit policies are configured so that the domain controller audits user log-on and log-off activity and generates an account log-on event when a domain user account is authenticated on this domain controller.

Barracuda DC Agent—The DC Agent is a Windows service that you install and configure on each LDAP domain controller server that runs Windows Server 2003 with SP1. Configuration of the service consists of specifying the Barracuda Web Filter devices with which the DC Agent is to communicate. Each instance of this service maintains a record of all the users that have been authenticated by the LDAP server.

The DC Agent service appears in the **Control Panel > Services** window. You can manually stop and start the DC Agent like all other Windows services. You should configure this service to start automatically. The DC Agent service does not impact the performance of your domain controller.

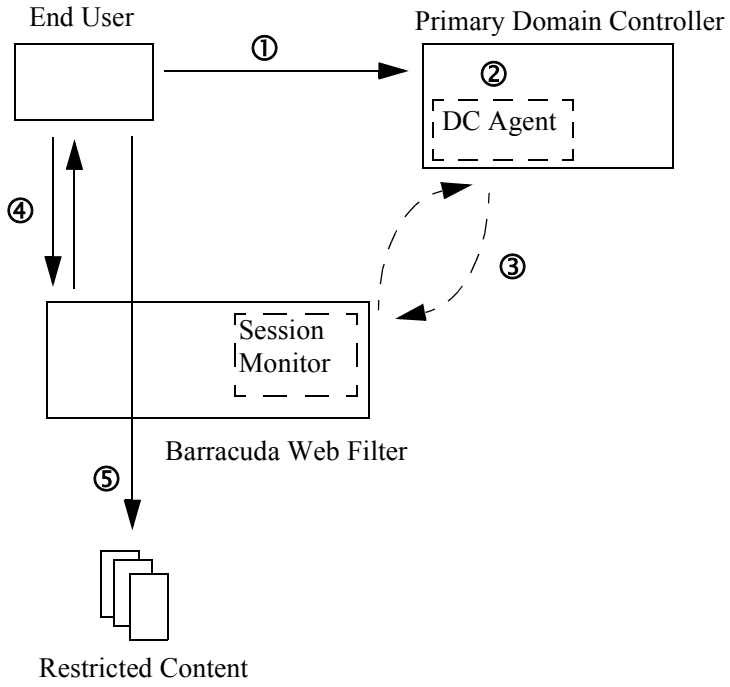
Session Manager—This is the process that you enable and configure on each Barracuda Web Filter that is to communicate with the DC Agent running on the domain controller. This process has the capability to communicate with multiple DC Agents.

Note: The Barracuda DC Agent software should *not* be installed on your **NTLM** domain controller. Moreover, no additional authentication services can be configured in the Barracuda Web Filter system if NTLM authentication is enabled.

The DC Agent performs the following functions:

- Enables the Barracuda Web Filter to track authenticated accounts in your LDAP directory.
- Keeps a record of all the users that have been authenticated by the domain controller, and then provides this information to the Session Monitor on the Barracuda Web Filter. The Session Monitor polls the DC Agent every 15 seconds to obtain the list of authenticated users. You can change the polling frequency on the **USERS/GROUPS > Configuration** page.
- All logging information for the DC Agent is stored in the `DCDebug.txt log`, which is located in the `C:\Program Files\Barracuda` directory. The DC Agent creates a new log file daily or when the size of existing log file exceeds 100 KB, whichever comes first. For example, `DCDebug.txt_2` is automatically created when the size of `DCDebug.txt_1` reaches 100 KB or passes the daily marker. Only the last ten log files are kept on the system. After the tenth log is created, the first log file is overwritten with new data. For this reason, it is important to view the time stamp on the log file to determine which file contains the latest data. Logging information is also shown on the Logs tab of the Barracuda DC Agent management interface. To open this interface, go to your domain controller and select **Start > Programs > Barracuda > DCAgent**.

The following figure illustrates this process.



1. A user logs into their domain and is authenticated by the domain controller.
2. The DC Agent keeps a record of the newly authenticated user.
3. The Session Monitor polls the DC Agent (every 15 seconds by default) and retrieves the latest list of authenticated users.
4. The user attempts to access a Web site that is blocked by the Barracuda Web Filter. The Barracuda Web Filter prompts the user to enter account information that will allow them to override the filter.
5. The user enters account information, and the Barracuda Web Filter determines if an exception policy exists that allows the account to override the filter. If an exception policy does exist, the user is allowed to access the previously blocked content.

Installing the Barracuda DC Agent on your domain controllers

To download, install, and configure the Barracuda DC Agent software, go to the **USERS/GROUPS > Configuration** page and navigate to the **DC Agent Configuration** section.

Exempting selected LDAP domain users from filtering

To exempt LDAP domain users from policy engine processing, go to the **USERS/GROUPS > Configuration** page and navigate to the **DC Agent Configuration** section. One use for this feature is to prevent traffic caused by script logic or other background users from appearing in the traffic log.

Enabling NTLM domain user authentication

If your network uses an NT LAN Manager (NTLM) authentication server, your NTLM domain users transparently become authenticated in the Barracuda Web Filter using their Microsoft Windows credentials. This single sign-on (SSO) method of access control is provided by transparent proxy authentication against the your NTLM server.

To enable transparent proxy authentication against your NTLM server, you must join the Barracuda Web Filter to the NTLM domain as an authorized host. The process of joining the domain also synchronizes NTLM group information from your domain controller to the Barracuda Web Filter.

About NTLM authentication in Windows 2000 or 2003 AD domains

Windows Server 2000 with Active Directory runs the NTLM authentication protocol by default.

With Windows Server 2003, NTLM authentication is available only in a **mixed mode** Active Directory domain. In a **native mode** Active Directory domain, Windows Server 2003 runs the Kerberos authentication protocol.

Reasons for using an NTLM authentication server

Typical reasons for using an NTLM authentication server are listed below:

- If you are replacing an existing forward proxy server that uses NTLM authentication.
- If your network cannot rely on all users presenting a unique IP address.

For detailed descriptions of these scenarios, see the online help for the **Authentication Services** page.

Requirements for using an NTLM authentication server

Before you integrate with an NTLM authentication server, verify the following requirements:

- The Barracuda Web Filter must be deployed as a forward proxy.
- No other authentication services may be configured.
- No Barracuda DC Agents may be in use on any of your domain controllers.
- You must enable the **Forced Proxy Authentication** option in the **USERS/GROUPS > Configuration** page.
- Web browsers must use the Barracuda Web Filter as the HTTP proxy.

For detailed descriptions of these requirements, see the online help for the **Authentication Services** page.

Limitations when using an NTLM authentication server

The following limitations apply when using an NTLM authentication server with the Barracuda Web Filter:

- No login override of blocked pages for NTLM domain users who encounter a block message.
- No logout option for NTLM domain users who proceed to a blocked Web page.
- NTLM domain users not listed in the **Account View** page.
- NTLM realm is not listed for users listed in the syslog output.

For detailed descriptions of these restrictions, see the online help for the **Authentication Services** page.

To enable NTLM user authentication

To enable NTLM user authentication, go to the **USERS/GROUPS > Authentication Services** page and see the online help topic for **NTLM**.

Viewing and managing accounts

The **USERS/GROUPS > Account View** page displays all the user accounts that have either been created locally on your Barracuda Web Filter or that reside in your LDAP database. This page lets you view details about each account and make the following changes to any locally created accounts:

- Edit a local account by assigning it to a group or enabling/disabling the account
- Change the password of a local account
- Delete a local account

To quickly locate a specific account, use the filter feature at the top of the page to search for specific patterns in the account details.

Appendix A

About the Barracuda Web Filter Hardware

This appendix provides hardware information for the Barracuda Web Filter. The following topics are covered:

Front panel of the Barracuda Web Filter *64*
Back panel of the Barracuda Web Filter *68*
Hardware compliance *71*

Front panel of the Barracuda Web Filter

Figure A.1, *Figure A.2*, and *Figure A.3* illustrate the front panels for each model.

Barracuda Web Filter 210, 310, and 410

Figure A.1 shows the front components as described in *Table A.1*.

Figure A.1: Barracuda Web Filter 210, 310, and 410 Front Panel

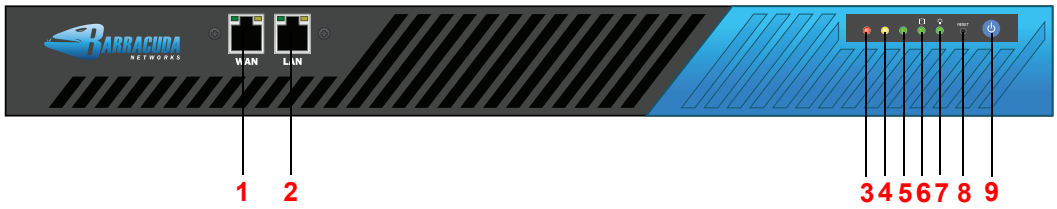


Table A.1 describes the front components on the Barracuda Web Filter 210, 310, and 410.

Table A.1: Front Panel Descriptions

Diagram Location	Component Name	Description
1	WAN port	Port for WAN connection
2	LAN port	Port for LAN connection
3	Spyware Activity	Displays spyware activity
4	Spyware or Virus Downloads	Displays download activity
5	Internet Activity	Displays normal Internet activity
6	Hard Disk	Displays hard disk activity
7	System Power	Displays system power
8	Reset Button	Resets the Barracuda Web Filter
9	Power Button	Powers on or off the Barracuda Web Filter

Barracuda Web Filter 610

Figure A.2 shows the front components as described in *Table A.2*.

Figure A.2: Barracuda Web Filter 610 Front Panel

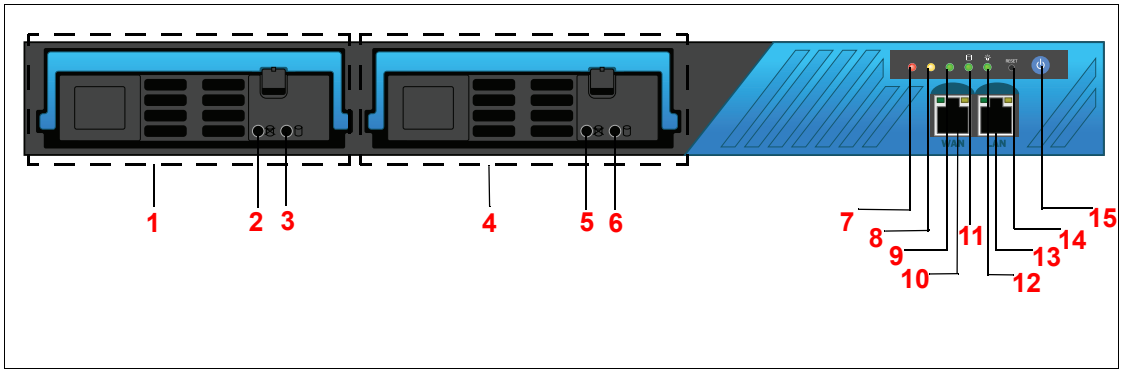


Table A.2 describes the front components on the Barracuda Web Filter 610.

Table A.2: Barracuda Web Filter 610 Front Panel Descriptions

Diagram Location	Component Name	Description
1	Hard Disk Drive #1	Location of #1 hard disk drive
2	Hard Disk Drive Inactivity	Displays the hard disk is inactive
3	Hard Disk Drive Activity	Displays the hard disk drive is active
4	Hard Disk Drive #2	Location of #2 hard disk drive
5	Hard Disk Drive Inactivity	Displays the hard disk is inactive
6	Hard Disk Drive Activity	Displays the hard disk drive is active
7	Spyware Activity	Displays spyware activity
8	Spyware or Virus Downloads	Displays spyware or virus downloads
9	Internet Activity	Displays normal Internet activity
10	WAN port	Port for WAN connection
11	Hard Disk	Displays hard disk activity
12	System Power	Displays system power
13	LAN Port	Port for LAN connection
14	Reset Button	Resets the Barracuda Web Filter
15	Power Button	Powers on or off the Barracuda Web Filter

Barracuda Web Filter 810 and 910

Figure A.3 shows the front components as described in *Table A.3*.

Figure A.3: Barracuda Web Filter 810 and 910 Front Panel

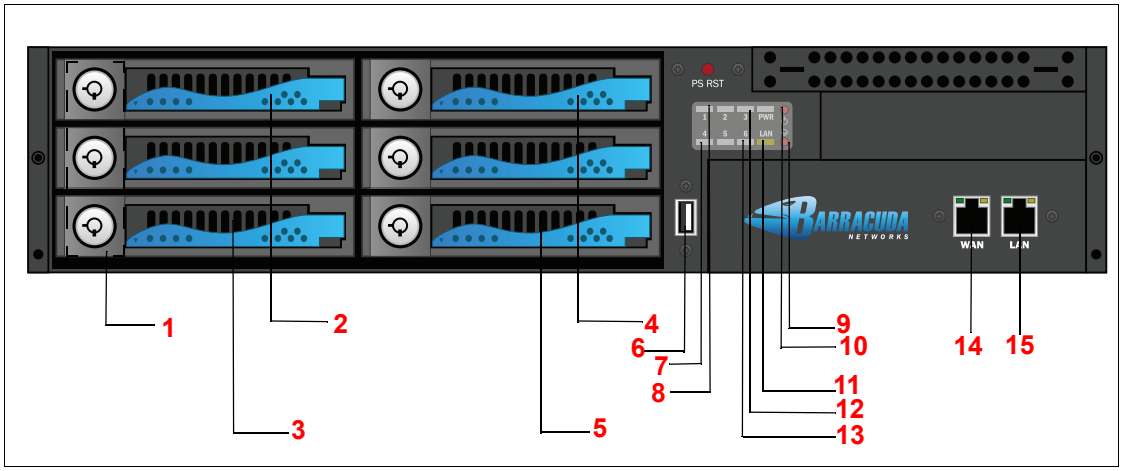


Table A.3 describes the front components on the Barracuda Web Filter 810 and 910.

Table A.3: Barracuda Web Filter 810 and 910 Front Panel Descriptions

Diagram Location	Component Name	Description
1	Hard Disk Drive Locks	These locks are security features to prevent access from the hard disk drives
2	Hard Disk Drive #1	Location of #1 hard disk drive
3	Hard Disk Drive #2	Location of #2 hard disk drive
4	Hard Disk Drive #3	Location of #3 hard disk drive
5	Hard Disk Drive #4	Location of #4 hard disk drive
6	USB Port	USB port for a mouse or keyboard
7	Hard Disk Drive # 4 Activity	Displays the activity for hard disk drive #4
8	Hard Disk Drive #1 Activity	Displays the activity for hard disk drive #1
9	Reset Button	Resets the Barracuda Web Filter
10	System Power	Displays the power for the Barracuda Web Filter
11	LAN	Displays the management for LAN connection
12	Hard Disk Drive #6 Activity	Displays the activity for hard disk drive #6

Table A.3: Barracuda Web Filter 810 and 910 Front Panel Descriptions

Diagram Location	Component Name	Description
13	Hard Disk Drive #4 Activity	Displays the activity for hard disk drive #4
14	WAN Port	Port for WAN connection
15	LAN Port	Port for LAN connection

Back panel of the Barracuda Web Filter

Figure A.4, *Figure A.5*, and *Figure A.6* illustrates the back panels for each model.

Barracuda Web Filter 210, 310, and 410

Figure A.4 shows the back components as described in *Table A.4*.

Figure A.4: Barracuda Web Filter 210, 310, and 410 Back Panel

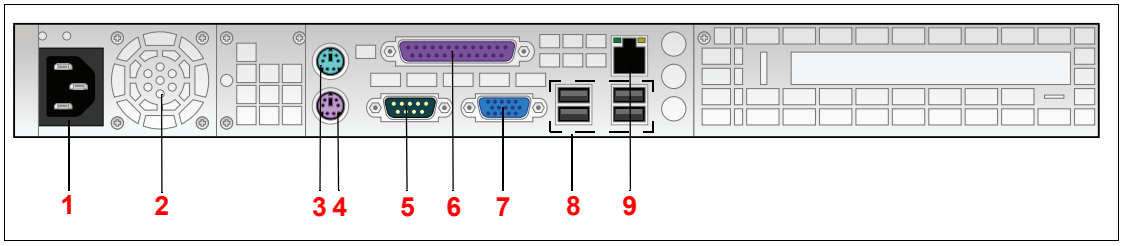


Table A.4 describes the back components on the Barracuda Web Filter 210, 310, and 410.

Table A.4: Barracuda Web Filter 210, 310, and 410 Back Component Descriptions

Diagram Location	Component Name	Description
1	Power Supply	Connection for the AC power cord; standard power supply
2	Fan	Location of the fan
3	Mouse Port	Connection for the mouse
4	Keyboard Port	Connection for the keyboard
5	Serial Port	Connection for the serial console cable
6	Parallel Port	Connection for the parallel cable
7	Monitor Port	Connection for the monitor
8	USB Ports (4)	Connection for USB devices
9	LAN Port	Connection for the LAN

Barracuda Web Filter 610

Figure A.5 shows the back components as described in *Table A.5*.

Figure A.5: Barracuda Web Filter 610 Back Panel

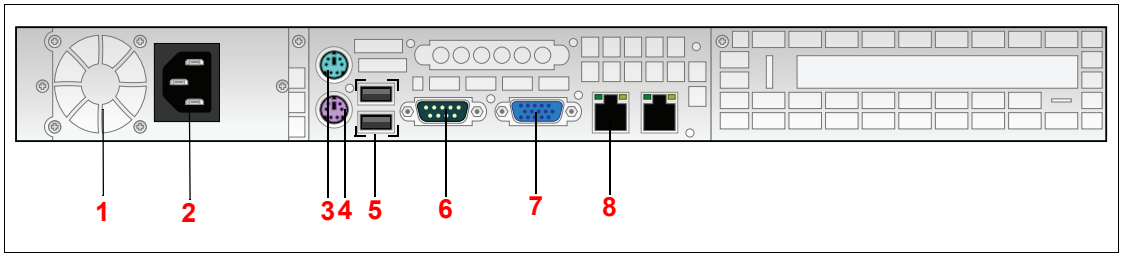


Table A.5 describes the back components on the Barracuda Web Filter 610.

Table A.5: Barracuda Web Filter 610 Back Component Descriptions

Diagram Location	Component Name	Description
1	Fan	Location of the fan
2	Power Supply	Connection for the AC power cord; standard power supply
3	Mouse Port	Connection for the mouse
4	Keyboard Port	Connection for the keyboard
5	USB Ports (2)	Connection for USB devices
6	Serial Port	Connection for the serial console cable
7	Monitor Port	Connection for the monitor
8	LAN Port	Connection for the LAN

Barracuda Web Filter 810 and 910

Figure A.6 shows the back components as described in *Table A.6*.

Figure A.6: Barracuda Web Filter 810 Front Panel

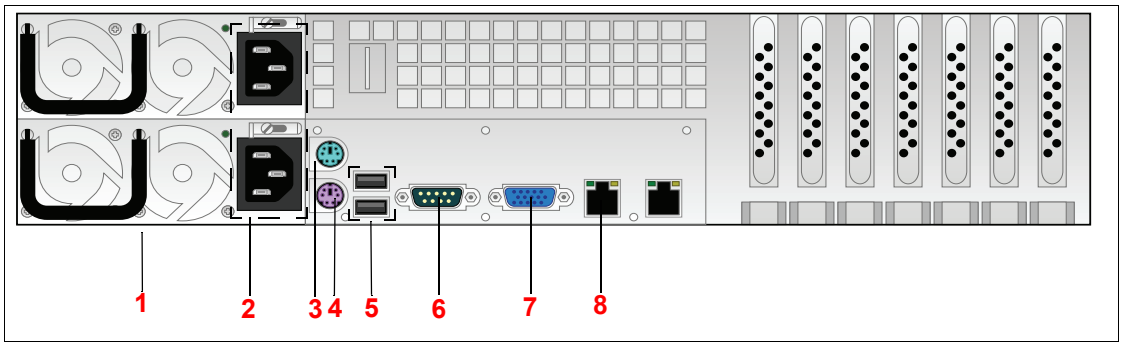


Table A.6 describes the back components on the Barracuda Web Filter 810 and 910.

Table A.6: Barracuda Web Filter 810 and 910 Back Component Descriptions

Diagram Location	Component Name	Description
1	Fans (4)	Locations of the fans
2	Power Supplies (2)	Connection for the AC power cord; standard power supply
3	Mouse Port	Connection for the mouse
4	Keyboard Port	Connection for the keyboard
5	USB ports (2)	Connections for USB devices
6	Serial Port	Connection for the serial console cable
7	Monitor Port	Connection for the monitor
8	LAN Port	Connection for the LAN

Hardware compliance

This section contains compliance information for the Barracuda Web Filter hardware.

Notice for the USA

Compliance Information Statement (Declaration of Conformity Procedure) DoC FCC Part 15: This device complies with part 15 of the FCC Rules.

Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received including interference that may cause undesired operation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user in encouraged to try one or more of the following measures:
   - Reorient or relocate the receiving antenna.
   - Increase the separation between the equipment and the receiver.
   - Plug the equipment into an outlet on a circuit different from that of the receiver.
   - Consult the dealer on an experienced radio/ television technician for help.

Notice for Canada

This apparatus compiles with the Class B limits for radio interference as specified in the Canadian Department of Communication Radio Interference Regulations.

Notice for Europe (CE Mark)

This product is in conformity with the Council Directive 89/336/EEC, 92/31/EEC (EMC).

Appendix B
Regular Expressions

You can use regular expressions in many of the Barracuda Web Filter features. Regular Expressions allow you to flexibly describe text so that a wide range of possibilities can be matched.

The following caveats apply when using regular expressions:

- Be careful when using special characters such as |, *, '.' in your text. For more information, refer toUsing special characters in expressions on page 74.
- All matches are not case sensitive.

Table B.1 describes the most common regular expressions supported by the Barracuda Web Filter.

Table B.1: Common Regular Expressions

Expression	Matches...
Operators	
*	Zero or more occurrences of the character immediately preceding
+	One or more occurrences of the character immediately preceding
?	Zero or one occurrence of the character immediately preceding
|	Either of the characters on each side of the pipe
( )	Characters between the parenthesis as a group
Character Classes	
.	Any character except new line
[ac]	Letter 'a' or letter 'c'
[^ac]	Anything but letter 'a' or letter 'c'
[a-z]	Letters 'a' through 'z'
[a-zA-Z.]	Letters 'a' through 'z' or 'A' through 'Z' or a dot
[a-z\-]	Letters 'a' through 'z' or a dash
\d	Digit, shortcut for **[0-9]**
\D	Non-digit, shortcut for **[^0-9]**
\a	Digit, shortcut for **[0-9]**
\w	Part of word: shortcut for **[A-Za-z0-9_]**
\W	Non-word character: shortcut for **[^\w]**

Table B.1: Common Regular Expressions

Expression	Matches...
\s	Space character: shortcut for **[\n\r\t]**
\S	Non-space character: shortcut for **[^\s]**
Miscellaneous	
^	Beginning of line
$	End of line
\b	Word boundary
\t	Tab character

Using special characters in expressions

The following characters have a special meaning in regular expressions and should be prepended by a backward slash (\ ) when you want them interpreted literally:

Table B.2: Special Characters

.	$
[	(
]	)
\	|
*	^
?	@

Examples

Table B.3 provides some examples to help you understand how regular expressions can be used.

Table B.3: Regular Expressions

Example	Matches...
viagra	viagra, VIAGRA or vIaGRa
d+	One or more digits: 0, 42, 007
(bad|good)	letters 'bad' or matches the letters 'good'
^free	letters 'free' at the beginning of a line
v[i1]agra	viagra or v1agra
v(ia|1a)gra	viagra or v1agra
v|agra	v|agra
v(i|1||)?agra	vagra, viagra, v1agra or v|agra
FREE	*FREE*
FREE V.*GRA	*FREE* VIAGRA, *FREE* VEHICLEGRA, etc

Appendix C

Limited Warranty and License

Limited warranty

Barracuda Networks, Inc., or the Barracuda Networks, Inc. subsidiary or authorized Distributor selling the Barracuda Networks product, if sale is not directly by Barracuda Networks, Inc., ("Barracuda Networks") warrants that commencing from the date of delivery to Customer (but in case of resale by a Barracuda Networks reseller, commencing not more than sixty (60) days after original shipment by Barracuda Networks, Inc.), and continuing for a period of one (1) year: (a) its products (excluding any software) will be free from material defects in materials and workmanship under normal use; and (b) the software provided in connection with its products, including any software contained or embedded in such products will substantially conform to Barracuda Networks published specifications in effect as of the date of manufacture. Except for the foregoing, the software is provided as is. In no event does Barracuda Networks warrant that the software is error free or that Customer will be able to operate the software without problems or interruptions. In addition, due to the continual development of new techniques for intruding upon and attacking networks, Barracuda Networks does not warrant that the software or any equipment, system or network on which the software is used will be free of vulnerability to intrusion or attack. The limited warranty extends only to you the original buyer of the Barracuda Networks product and is non-transferable.

Exclusive remedy

Your sole and exclusive remedy and the entire liability of Barracuda Networks under this limited warranty shall be, at Barracuda Networks or its service centers option and expense, the repair, replacement or refund of the purchase price of any products sold which do not comply with this warranty. Hardware replaced under the terms of this limited warranty may be refurbished or new equipment substituted at Barracuda Networks option. Barracuda Networks obligations hereunder are conditioned upon the return of affected articles in accordance with Barracuda Networks then-current Return Material Authorization ("RMA") procedures. All parts will be new or refurbished, at Barracuda Networks discretion, and shall be furnished on an exchange basis. All parts removed for replacement will become the property of the Barracuda Networks. In connection with warranty services hereunder, Barracuda Networks may at its discretion modify the hardware of the product at no cost to you to improve its reliability or performance. The warranty period is not extended if Barracuda Networks repairs or replaces a warranted product or any parts. Barracuda Networks may change the availability of limited warranties, at its discretion, but any changes will not be retroactive. IN NO EVENT SHALL BARRACUDA NETWORKS LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, ITS ACCOMPANYING SOFTWARE, OR ITS DOCUMENTATION.

Exclusions and restrictions

This limited warranty does not apply to Barracuda Networks products that are or have been (a) marked or identified as "sample" or "beta," (b) loaned or provided to you at no cost, (c) sold "as is," (d) repaired, altered or modified except by Barracuda Networks, (e) not installed, operated or maintained in accordance with instructions supplied by Barracuda Networks, or (f) subjected to abnormal physical or electrical stress, misuse, negligence or to an accident.

EXCEPT FOR THE ABOVE WARRANTY, BARRACUDA NETWORKS MAKES NO OTHER WARRANTY, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT TO BARRACUDA NETWORKS PRODUCTS, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF TITLE, AVAILABILITY, RELIABILITY, USEFULNESS, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR ARISING FROM COURSE OF PERFORMANCE, DEALING, USAGE OR TRADE. EXCEPT FOR THE ABOVE WARRANTY, BARRACUDA NETWORKS PRODUCTS AND THE SOFTWARE IS PROVIDED "AS IS" AND BARRACUDA NETWORKS DOES NOT WARRANT THAT ITS PRODUCTS WILL MEET YOUR REQUIREMENTS OR BE UNINTERRUPTED, TIMELY, AVAILABLE, SECURE OR ERROR-FREE, OR THAT ANY ERRORS IN ITS PRODUCTS OR THE SOFTWARE WILL BE CORRECTED. FURTHERMORE, BARRACUDA NETWORKS DOES NOT WARRANT THAT BARRACUDA NETWORKS PRODUCTS, THE SOFTWARE OR ANY EQUIPMENT, SYSTEM OR NETWORK ON WHICH BARRACUDA NETWORKS PRODUCTS WILL BE USED WILL BE FREE OF VULNERABILITY TO INTRUSION OR ATTACK.

Software license

PLEASE READ THIS SOFTWARE LICENSE AGREEMENT ("AGREEMENT") CAREFULLY BEFORE USING THE BARRACUDA SOFTWARE. BY USING THE BARRACUDA SOFTWARE YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS LICENSE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE DO NOT USE THE SOFTWARE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE YOU MAY RETURN THE SOFTWARE OR HARDWARE CONTAINING THE SOFTWARE FOR A FULL REFUND TO YOUR PLACE OF PURCHASE.

1. The software, documentation, whether on disk, in read only memory, or on any other media or in any other form (collectively "Barracuda Software") is licensed, not sold, to you by Barracuda Networks, Inc. ("Barracuda") for use only under the terms of this License and Barracuda reserves all rights not expressly granted to you. The rights granted are limited to Barracuda's intellectual property rights in the Barracuda Software and do not include any other patent or intellectual property rights. You own the media on which the Barracuda Software is recorded but Barracuda retains ownership of the Barracuda Software itself.

2. Permitted License Uses and Restrictions. This License allows you to use the Software only on the single Barracuda labeled hardware device on which the software was delivered. You may not make copies of the Software and you may not make the Software available over a network where it could be utilized by multiple devices or copied. You may not make a backup copy of the Software. You may not modify or create derivative works of the Software except as provided by the Open Source Licenses included below. The BARRACUDA SOFTWARE IS NOT INTENDED FOR USE IN THE OPERATION OF NUCLEAR FACILITIES, AIRCRAFT NAVIGATION OR COMMUNICATION SYSTEMS, LIFE SUPPORT MACHINES, OR OTHER EQUIPEMENT IN WHICH FAILURE COULD LEAD TO DEATH, PERSONAL INJURY, OR ENVIRONMENTAL DAMAGE.

3. You may not transfer, rent, lease, lend, or sublicense the Barracuda Software.

4. This License is effective until terminated. This License is automatically terminated without notice if you fail to comply with any term of the License. Upon termination you must destroy or return all copies of the Barracuda Software.

5. YOU EXPRESSLY ACKNOWLEDGE AND AGREE THAT THE USE OF THE BARRACUDA SOFTWARE IS AT YOUR OWN RISK AND THAT THE ENTIRE RISK AS TO SATISFACTION, QUALITY, PERFORMANCE, AND ACCURACY IS WITH YOU. THE BARRACUDA SOFTWARE IS PROVIDED "AS IS" WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND, AND BARRACUDA HEREBY DISCLAIMS ALL WARRANTIES AND CONDITIONS WITH RESPECT TO THE BARRACUDA SOFTWARE, EITHER EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES AND/OR CONDITIONS OF MERCHANTIBILITY, OF SATISFACTORY QUALITY, OF FITNESS FOR ANY APPLICATION, OF ACCURACY, AND OF NON-INFRINGEMENT OF THIRD PARTY RIGHTS. BARRACUDA DOES NOT WARRANT THE CONTINUED OPERATION OF THE SOFTWARE, THAT THE PERFORMANCE WILL MEET YOUR EXPECTATIONS, THAT THE FUNCTIONS WILL MEET YOUR REQUIREMENTS, THAT THE OPERATION WILL BE ERROR FREE OR CONTINUOUS, OR THAT DEFECTS WILL BE CORRECTED. NO ORAL OR WRITTEN INFORMATION GIVEN BY BARRACUDA OR AUTHORIZED BARRACUDA REPRESENTATIVE SHALL CREATE A WARRANTY. SHOULD THE BARRACUDA SOFTWARE PROVE DEFECTIVE, YOU ASSUME THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR, OR CORRECTION.

6. License. YOU EXPRESSLY ACKNOWLEDGE AND AGREE THAT YOU WILL PROVIDE AN UNLIMITED ZERO COST LICENSE TO BARRACUDA FOR ANY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS UTILIZED IN THE BARRACUDA SOFTWARE WHICH YOU EITHER OWN OR CONTROL.

7. Limitation of Liability. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT SHALL BARRACUDA BE LIABLE FOR PERSONAL INJURY OR ANY INCIDENTAL SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, LOSS OF DATA, BUSINESS INTERRUPTION, OR ANY OTHER COMMERCIAL DAMAGES OR LOSSES, ARISING OUT OF OR RELATED TO YOUR ABILITY TO USE OR INABILITY TO USE THE BARRACUDA SOFTWARE HOWEVER CAUSED, REGARDLESS OF THE THEORY OF LIABILITY AND EVEN IF BARRACUDA HAS BEEN ADVISED OF THE POSSIBILITY OF DAMAGES. In no event shall Barracuda's total liability to you for all damages exceed the amount of one hundred dollars.

8. Export Control. You may not use or otherwise export or re-export Barracuda Software except as authorized by the United States law and the laws of the jurisdiction where the Barracuda Software was obtained.

Energize Update Software license

PLEASE READ THIS ENERGIZE UPDATE SOFTWARE LICENSE CAREFULLY BEFORE DOWNLOADING, INSTALLING OR USING BARRACUDA NETWORKS OR BARRACUDA NETWORKS-SUPPLIED ENERGIZE UPDATE SOFTWARE.

BY DOWNLOADING OR INSTALLING THE ENERGIZE UPDATE SOFTWARE, OR USING THE EQUIPMENT THAT CONTAINS THIS SOFTWARE, YOU ARE CONSENTING TO BE BOUND BY THIS LICENSE. IF YOU DO NOT AGREE TO ALL OF THE TERMS OF THIS LICENSE, THEN (A) DO NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE, AND (B) YOU MAY RETURN THE SOFTWARE FOR A FULL REFUND, OR, IF THE SOFTWARE IS SUPPLIED AS PART OF ANOTHER PRODUCT, YOU MAY RETURN THE ENTIRE

PRODUCT FOR A FULL REFUND. YOUR RIGHT TO RETURN AND REFUND EXPIRES 30 DAYS AFTER PURCHASE FROM BARRACUDA NETWORKS OR AN AUTHORIZED BARRACUDA NETWORKS RESELLER, AND APPLIES ONLY IF YOU ARE THE ORIGINAL PURCHASER.

The following terms govern your use of the Energize Update Software except to the extent a particular program (a) is the subject of a separate written agreement with Barracuda Networks or (b) includes a separate "click-on" license agreement as part of the installation and/or download process. To the extent of a conflict between the provisions of the foregoing documents, the order of precedence shall be (1) the written agreement, (2) the click-on agreement, and (3) this Energize Update Software License.

License. Subject to the terms and conditions of and except as otherwise provided in this Agreement, Barracuda Networks, Inc., or a Barracuda Networks, Inc. subsidiary (collectively "Barracuda Networks"), grants to the end-user ("Customer") a nonexclusive and nontransferable license to use the Barracuda Networks Energize Update program modules and data files for which Customer has paid the required license fees (the "Energize Update Software"). In addition, the foregoing license shall also be subject to the following limitations, as applicable:

Unless otherwise expressly provided in the documentation, Customer shall use the Energize Update Software solely as embedded in, for execution on, or (where the applicable documentation permits installation on non-Barracuda Networks equipment) for communication with Barracuda Networks equipment owned or leased by Customer; Customer's use of the Energize Update Software shall be limited to use on a single hardware chassis, on a single central processing unit, as applicable, or use on such greater number of chassis or central processing units as Customer may have paid Barracuda Networks the required license fee; and Customer's use of the Energize Update Software shall also be limited, as applicable and set forth in Customer's purchase order or in Barracuda Networks' product catalog, user documentation, or web site, to a maximum number of (a) seats (i.e. users with access to the installed Energize Update Software), (b) concurrent users, sessions, ports, and/or issued and outstanding IP addresses, and/or (c) central processing unit cycles or instructions per second. Customer's use of the Energize Update Software shall also be limited by any other restrictions set forth in Customer's purchase order or in Barracuda Networks' product catalog, user documentation or web site for the Energize Update Software.

General Limitations. Except as otherwise expressly provided under this Agreement, Customer shall have no right, and Customer specifically agrees not to:

i. transfer, assign or sublicense its license rights to any other person, or use the Energize Update Software on unauthorized or secondhand Barracuda Networks equipment, and any such attempted transfer, assignment or sublicense shall be void;

ii. make error corrections to or otherwise modify or adapt the Energize Update Software or create derivative works based upon the Energize Update Software, or to permit third parties to do the same; or

iii. decompile, decrypt, reverse engineer, disassemble or otherwise reduce the Energize Update Software to human-readable form to gain access to trade secrets or confidential information in the Energize Update Software.

Upgrades and Additional Copies. For purposes of this Agreement, "Energize Update Software" shall include (and the terms and conditions of this Agreement shall apply to) any Energize Update upgrades, updates, bug fixes or modified versions (collectively, "Upgrades") or backup copies of the Energize Update Software licensed or provided to Customer by Barracuda Networks or an authorized distributor/reseller for which Customer has paid the applicable license fees. NOTWITHSTANDING ANY OTHER PROVISION OF THIS AGREEMENT: (1) CUSTOMER HAS NO LICENSE OR RIGHT TO USE ANY SUCH ADDITIONAL COPIES OR UPGRADES UNLESS CUSTOMER, AT THE TIME OF ACQUIRING SUCH COPY OR UPGRADE, ALREADY HOLDS A VALID LICENSE TO THE ORIGINAL ENERGIZE UPDATE SOFTWARE AND HAS PAID THE

APPLICABLE FEE FOR THE UPGRADE; (2) USE OF UPGRADES IS LIMITED TO BARRACUDA NETWORKS EQUIPMENT FOR WHICH CUSTOMER IS THE ORIGINAL END USER PURCHASER OR LESSEE OR WHO OTHERWISE HOLDS A VALID LICENSE TO USE THE ENERGIZE UPDATE SOFTWARE WHICH IS BEING UPGRADED; AND (3) USE OF ADDITIONAL COPIES IS LIMITED TO BACKUP PURPOSES ONLY.

Energize Update Changes. Barracuda Networks reserves the right at any time not to release or to discontinue release of any Energize Update Software and to alter prices, features, specifications, capabilities, functions, licensing terms, release dates, general availability or other characteristics of any future releases of the Energize Update Software.

Proprietary Notices. Customer agrees to maintain and reproduce all copyright and other proprietary notices on all copies, in any form, of the Energize Update Software in the same form and manner that such copyright and other proprietary notices are included on the Energize Update Software. Except as expressly authorized in this Agreement, Customer shall not make any copies or duplicates of any Energize Update Software without the prior written permission of Barracuda Networks. Customer may make such backup copies of the Energize Update Software as may be necessary for Customer's lawful use, provided Customer affixes to such copies all copyright, confidentiality, and proprietary notices that appear on the original.

Protection of Information. Customer agrees that aspects of the Energize Update Software and associated documentation, including the specific design and structure of individual programs, constitute trade secrets and/or copyrighted material of Barracuda Networks. Customer shall not disclose, provide, or otherwise make available such trade secrets or copyrighted material in any form to any third party without the prior written consent of Barracuda Networks. Customer shall implement reasonable security measures to protect and maintain the confidentiality of such trade secrets and copyrighted material. Title to Energize Update Software and documentation shall remain solely with Barracuda Networks.

Indemnity. Customer agrees to indemnify, hold harmless and defend Barracuda Networks and its affiliates, subsidiaries, officers, directors, employees and agents at Customers expense, against any and all third-party claims, actions, proceedings, and suits and all related liabilities, damages, settlements, penalties, fines, costs and expenses (including, without limitation, reasonable attorneys fees and other dispute resolution expenses) incurred by Barracuda Networks arising out of or relating to Customers (a) violation or breach of any term of this Agreement or any policy or guidelines referenced herein, or (b) use or misuse of the Barracuda Networks Energize Update Software.

Term and Termination. This License is effective upon date of delivery to Customer of the initial Energize Update Software (but in case of resale by a Barracuda Networks distributor or reseller, commencing not more than sixty (60) days after original Energize Update Software purchase from Barracuda Networks) and continues for the period for which Customer has paid the required license fees. Customer may terminate this License at any time by notifying Barracuda Networks and ceasing all use of the Energize Update Software. By terminating this License, Customer forfeits any refund of license fees paid and is responsible for paying any and all outstanding invoices. Customer's rights under this License will terminate immediately without notice from Barracuda Networks if Customer fails to comply with any provision of this License. Upon termination, Customer must cease use of all copies of Energize Update Software in its possession or control.

Export. Software, including technical data, may be subject to U.S. export control laws, including the U.S. Export Administration Act and its associated regulations, and may be subject to export or import regulations in other countries. Customer agrees to comply strictly with all such regulations and acknowledges that it has the responsibility to obtain licenses to export, re-export, or import Energize Update Software.

Restricted Rights. Barracuda Networks' commercial software and commercial computer software documentation is provided to United States Government agencies in accordance with the terms of this Agreement, and per subparagraph "(c)" of the "Commercial Computer Software - Restricted Rights" clause at FAR 52.227-19 (June 1987). For DOD agencies, the restrictions set forth in the "Technical Data-Commercial Items" clause at DFARS 252.227-7015 (Nov 1995) shall also apply.

No Warranty. The Energize Update Software is provided AS IS. Customer's sole and exclusive remedy and the entire liability of Barracuda Networks under this Energize Update Software License Agreement will be, at Barracuda Networks option, repair, replacement, or refund of the Energize Update Software.

Renewal. At the end of the Energize Update Service Period, Customer may have the option to renew the Energize Update Service at the current list price, provided such Energize Update Service is available. All initial subscriptions commence at the time of sale of the unit and all renewals commence at the expiration of the previous valid subscription.

In no event does Barracuda Networks warrant that the Energize Update Software is error free or that Customer will be able to operate the Energize Update Software without problems or interruptions. In addition, due to the continual development of new techniques for intruding upon and attacking networks, Barracuda Networks does not warrant that the Energize Update Software or any equipment, system or network on which the Energize Update Software is used will be free of vulnerability to intrusion or attack.

DISCLAIMER OF WARRANTY. ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS, AND WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, SATISFACTORY QUALITY OR ARISING FROM A COURSE OF DEALING, LAW, USAGE, OR TRADE PRACTICE, ARE HEREBY EXCLUDED TO THE EXTENT ALLOWED BY APPLICABLE LAW. TO THE EXTENT AN IMPLIED WARRANTY CANNOT BE EXCLUDED, SUCH WARRANTY IS LIMITED IN DURATION TO THE WARRANTY PERIOD. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION.

General Terms Applicable to the Energize Update Software License Disclaimer of Liabilities. IN NO EVENT WILL BARRACUDA NETWORKS BE LIABLE FOR ANY LOST REVENUE, PROFIT, OR DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY ARISING OUT OF THE USE OF OR INABILITY TO USE THE ENERGIZE UPDATE SOFTWARE EVEN IF BARRACUDA NETWORKS OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In no event shall Barracuda Networks' liability to Customer, whether in contract, tort (including negligence), or otherwise, exceed the price paid by Customer. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATION OR EXCLUSION OF CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

This Energize Update Software License shall be governed by and construed in accordance with the laws of the State of California, without reference to principles of conflict of laws, provided that for Customers located in a member state of the European Union, Norway or Switzerland, English law shall apply. The United Nations Convention on the International Sale of Goods shall not apply. If any portion hereof is found to be void or unenforceable, the remaining provisions of the Energize Update Software License shall remain in full force and effect. Except as expressly provided herein, the Energize Update Software License constitutes the entire agreement between the parties with respect to the license of the Energize Update Software and supersedes any conflicting or additional terms contained in the purchase order.

Open Source Licensing

Barracuda products may include programs that are covered by the GNU General Public License (GPL) or other "open source" license agreements. The GNU license is re-printed below for you reference. These programs are copyrighted by their authors or other parties, and the authors and copyright holders disclaim any warranty for such programs. Other programs are copyright by Barracuda Networks.

GNU GENERAL PUBLIC LICENSE, (GPL) Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51
Franklin St, Fifth Floor, Boston, MA 02110-1301 USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public

License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whethergratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A

FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
one line to give the program's name and an idea of what it does.

Copyright (C) yyyy  name of author
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) 19yy name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

signature of Ty Coon, 1 April 1989 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

Barracuda Products may contain programs that are copyright (c)1995-2005 International Business Machines Corporation and others. All rights reserved. These programs are covered by the following License:

"Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation."

Barracuda Products may include programs that are covered by the BSD License: "Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED ``AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE."

Barracuda Products may include the libspf library which is Copyright (c) 2004 James Couzens & Sean Comeau All rights reserved. It is covered by the following agreement: Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. THIS SOFTWARE IS PROVIDED ``AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHORS MAKING USE OF THIS LICENSE OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Barracuda Products may contain programs that are Copyright (c) 1998-2003 Carnegie Mellon University. All rights reserved. Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. The name "Carnegie Mellon University" must not be used to endorse or promote products derived from this software without prior written permission. For permission or any other legal details, please contact Office of Technology Transfer Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, PA 15213-3890 (412) 268-4387, fax: (412) 268-7395 tech-transfer@andrew.cmu.edu .Redistributions of any form whatsoever must retain the following

acknowledgment: "This product includes software developed by Computing Services at Carnegie Mellon University (http://www.cmu.edu/computing/)." CARNEGIE MELLON UNIVERSITY DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL CARNEGIE MELLON UNIVERSITY BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Barracuda products may include programs that are covered by the Apache License or other Open Source license agreements. The Apache license is re-printed below for you reference. These programs are copyrighted by their authors or other parties, and the authors and copyright holders disclaim any warranty for such programs. Other programs are copyright by Barracuda Networks.

Apache License Version 2.0, January 2004 http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code

control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Source Code Availability

Per the GPL and other "open source" license agreements the complete machine readable source code for programs covered by the GPL or other "open source" license agreements is available from Barracuda Networks at no charge. If you would like a copy of the source code or the changes to a particular program we will gladly provide them, on a CD, for a fee of $100.00. This fee is to pay for the time for a Barracuda Networks engineer to assemble the changes and source code, create the

media, package the media, and mail the media. Please send a check payable in USA funds and include the program name. We will mail the packaged source code for any program covered under the GPL or other "open source" license.

Index

A

accounts, creating 55
Active mode 16, 25, 29
administration interface
  logging in 21
Administration page 34, 46, 49
alerts, email 46
Appearance page 34
Applications page 37
Audit mode 21
authentication server
  LDAP 56
  NTLM 59

B

back panel details 68
backing up configuration 48
Backup page 48
Barracuda reboot option 51
Barracuda Spyware Removal Tool
  about 40
  enabling 40
  viewing a list of prompted clients 46
Barracuda Web Filter
  configuring 20, 32
  connecting to network 24
  installing 18
  linking 32, 34
  managing 48
  monitoring 43
Block Messages page 39
block/accept filters 36
Browse Test page 42

C

Caching page 35
character tags 75
configuring, Barracuda Web Filter 20
Content Filter page 37
creating
  local accounts 55
  local groups 55
Custom Categories page 38

D

definitions, updating 23, 48
deployment types
  forward proxy 13
  inline pass-through 11
diagnostic memory test 51
domain users
  LDAP 56
  NTLM 59
Domains page 38

E

Energize Updates 9, 48

F

failed system, replacing 49
files system repair 51
filters
  block messages 39
  blocked IP addresses 39
  content 37
  custom categories 38
  domains and subdomains 38
  exempt IP addresses 39
  MIME-type blocking 39
  URL patterns 38
  Web applications 37
firewall, configuring 20
Firmware Update page 48
forward proxy deployment 13
front panel details 64

G

groups, creating 55

H

hardware compliance information 71
hardware test 51
Hardware_Test reboot option 51

HTTPS filtering option 41

I

indicator lights 43
infected clients list 46
Infection Activity page 46
inline pass-through deployment 11
installing, Barracuda Web Filter 18
IP address, setting 19
IP Block/Exempt page 39
IP Configuration page 32

L

language, changing in administration interface 34
LDAP authentication server 56
LEDs (on front panel) 43
lights (on front panel) 43
Linked Management page 32, 34
local users 55
    See also domain users 54
Log page 44

M

MIME Blocking page 39
monitoring spyware and Web activity
    Account View page 56, 59, 61
    Application Log page 45
    Infection Activity page 40, 46
    Log page 44
    Reports page 46
    Status page 43
    Warned Activity page 45
monitoring system status
    Barracuda Web Filter 210, 310, and 410 front panel 64
    Barracuda Web Filter 610 front panel 65
    Barracuda Web Filter 810 and 910 front panel 66
    Status page 43
    Troubleshooting page 49, 50, 51

N

network planning 16
network time protocol (NTP) 21
notifications, email 46
NTLM authentication server 59

O

operating mode, Barracuda Web Filter
    Active mode 16, 25, 29
    Audit mode 21

P

pre-existing proxy server 26

R

reboot options 50, 51
Recovery Console reboot option 51
recovery mode 50
regular expressions, about 73
re-imaging system 51
reloading the system 49
remote administration 51
repairing, file system 51
replacing failed system 49
Reports page 46
RESET button, using 49
restarting the system 49
restoring configuration 48

S

shutting down the system 49
standby systems 32, 34
Status page 43
subscription
    activating 23
    status 22
Syslog page 35

T

Task Manager page 46
TCP ports 20
testing memory 51
testing URLs 42
time zone, setting 34
transparent mode 11
Troubleshooting page 49

U

UDP ports 20
updating
    definitions 23, 48
    firmware 48
URL Patterns page 38

V

Virus Checking page 35

W

Warned Activity page 45